10¢ A COPY

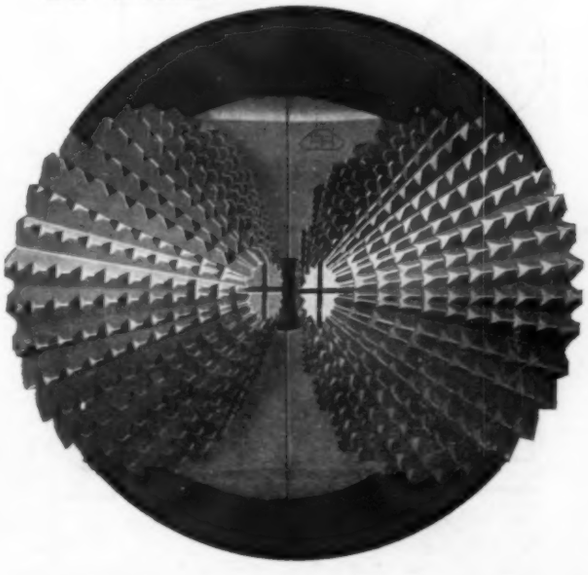
The OIL WEEKLY

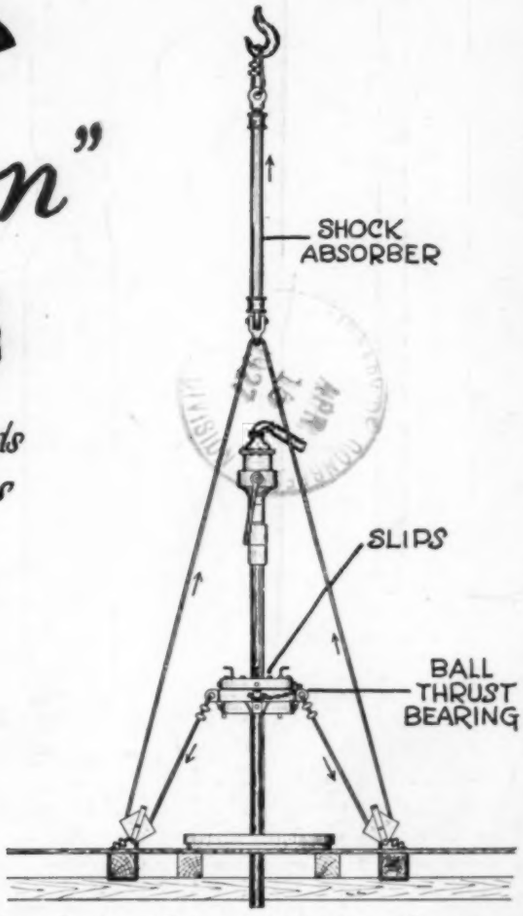
November 26, 1926 Volume 43. No. 10

HUGHES

"Pulling Down" RIG

-One of the most recent achievements of the Hughes Tool Company's engineers toward making the use of the rotary practical throughout the oil fields of the world.





Write for complete information and price of this new device that makes possible the drilling of hard formations at shallow depths with

Hughes Rock Bits

HUGHES TOOL CO.

Branch Plants Los Angeles, Calif. Oklahoma City, Okla.

Home Office and Plant Houston, Texas

Export Office New York City, N. Y.

"EXTRAS"
IN
ACME DRILLING AND FISHING TOOLS

MANY of the outstanding features of Acme Drilling and Fishing Tools represent extra care in manufacture and in attention to the details of the tool's construction in its relation to the services it must perform. These "extras" are not necessary to make Acme Tools as good as other tools. But they do serve to put our tools in a class by themselves. And for the additional margin of QUALITY, SERVICE and VALUE we put into Acme Tools, the user pays, or rents, at approximately the same price he would have to pay for similar equipment which lacks these refinements.

These seven examples of tools show, in each case, how Acme gives you something more for your money. Selected at random from the hundreds of Acme products, they typify the "extras" you will always get in Acme equipment.

Patented

Bowl and Guide Spear

ACME
IMPROVED TUBING SPEARS

These Spears have a stop ring near the upper end. By loosening this ring when the Spear has been withdrawn from the well with tubing it is easy to break the hitch and release the tubing, thus eliminating splitting or cutting it. The spear bowls have a hole that permits ready access to the stop ring without removing the bowls. The feature is patented and represents an EXTRA characteristic that is widely appreciated.

ACME
CENTER SPEARS FOR WIRE LINE

The Duck Bills, or Wickers, are ingeniously flat-shaped so that they not only catch the wire line securely but also eliminate the tendency for the line to slip through, which is a common experience with equipment that does not have this EXTRA provision for successfully bringing out the line in record time. This valuable feature is an Acme specialty.

ACME
LATCH JACKS

The Latch in these Latch Jacks is backed up with a flat spring. This spring closes the latch when taking hold and keeps it closed when jarring.

The construction is exclusive. It represents EXTRA value in a super performing piece of equipment.

ACME
DRILL MILLS

This tool is designed for and can be depended upon to give a longer and better service because the steel is selected from a grade noted for toughness; and the cutting edge is given special heat treatment. The extra hardening results in EXTRA satisfaction in the use of these tools.

ACME
IMPROVED CRACKER ROPE KNIFE—
(Patented)

In these knives the trip is entirely enclosed in the body in such a way that it cannot trip until it reaches the tools. When the knife is tripped, the tripping rod is automatically locked in an inoperative position and cannot interfere with the action of the knife. These knives give an EXTRA service.

Patented

ACME
SPUDS

It costs twice as much to make Acme Spuds out of Bit Steel as it would to make them out of common steel of ordinary carbon analysis. The EXTRA value shows up in the EXTRA work these spuds give, with less labor in tempering. Yet Acme Spuds cost no more than ordinary spuds.

ACME FISHING TOOL CO.
Parkersburg, West Virginia.

Export Office: 136 Liberty St., New York City, N.Y.

Warehouses and Distributors:

Midland Iron Works—Billings, Montana.
Great Northern Tool & Supply Co.—Kevin, Mont.
Acme Rental Tool Service Co.—Graham, Texas.
Acme Tool Company—Albany, Texas.
Acme Fishing Tool Co. of Tex.—Vernon, Tex.
Acme Tool Company—Cross Plains, Texas.
Acme Tool Company—McCamey, Texas.
Acme Fishing Tool Co.—Whittenburg, Texas.
Elms Bros. & Company—Waynesburg, Pa.
B. & A. Specialty Company—Tulsa, Okla.
Acme Fishing Tool Co.—Okmulgee, Okla.
Logan Foundry & Machine Co.—Logan, O.
Lloyd, Smith Company—Bradford, Pa.

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SERVICE
SERVICE, always important, becomes doubly important when urgently needed. It is then that our location, in the heart of the oil industry, performs its most important function.
Pumps and parts sent from Tulsa are on the job and working by the time shipments from other points are fairly under way.
Combine this advantage with Gaso quality and you have a simple explanation of Gaso leadership.
GASO PUMP & BURNER MFG. CO. -- Tulsa, Okla.
Few pumps in the Gaso line have enjoyed such instantaneous success as the new Gaso Portable Pumping Unit: a heavy duty worm driven, self-lubricating pump, mounted on a standard tread wooden wheel truck with cushion tires. Can be transported anywhere for regular or emergency service. Provides genuine pump insurance.
New Gaso Portable Pumping Unit.

Safety

EVERY DRILLER familiar with the International "IDECO" Derrick knows its enormous reserve strength and works under this super-strong rig with utmost confidence.

The derrick man too has faith in "IDECO." Steel Crows Nests, Kelleys and Safety Platforms with guard rails, and ladders with double riveted round rungs provide for his safety. Their adoption on your rigs give adequate protection for the whole crew and promotes more efficient work.

The casualty risk, however, is only one of the risks involved in a drilling program. International "IDECO" Galvanized Steel Derricks, Wheels, and equipment mean a permanent, yet portable installation, minimizing risk, loss of production, and upkeep expense. Fire, Wind and Rust Hazards are baffled by "IDECO." A safe derrick to work under and easy to erect.

INTERNATIONAL STEEL IDECO DERRICKS

(GALVANIZED)

Built In and Built On

THERE are other important factors of Safety—factors which have won for "IDECO" Derricks the oil producer's respect in every field.

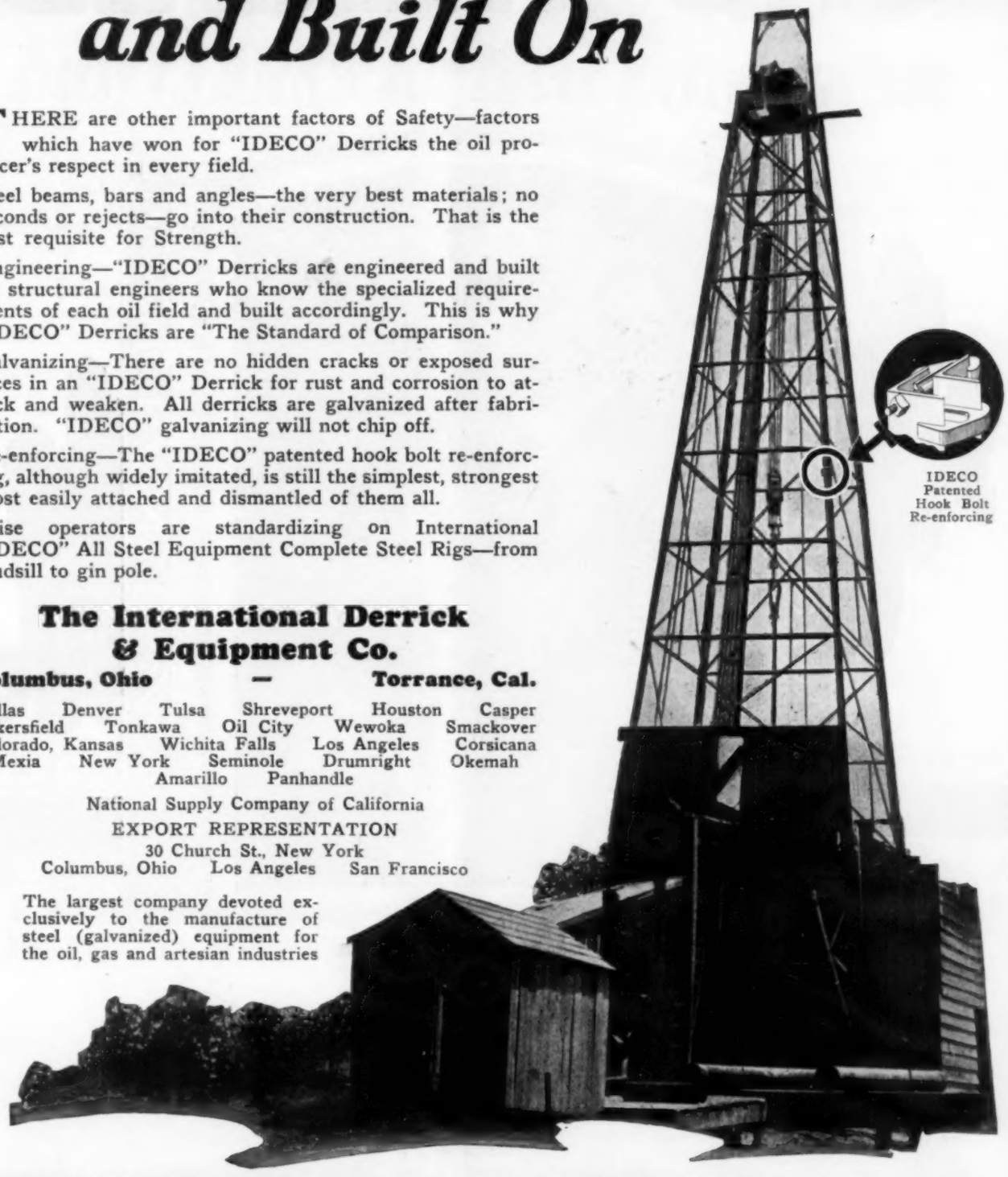
Steel beams, bars and angles—the very best materials; no seconds or rejects—go into their construction. That is the first requisite for Strength.

Engineering—"IDECO" Derricks are engineered and built by structural engineers who know the specialized requirements of each oil field and built accordingly. This is why "IDECO" Derricks are "The Standard of Comparison."

Galvanizing—There are no hidden cracks or exposed surfaces in an "IDECO" Derrick for rust and corrosion to attack and weaken. All derricks are galvanized after fabrication. "IDECO" galvanizing will not chip off.

Re-enforcing—The "IDECO" patented hook bolt re-enforcing, although widely imitated, is still the simplest, strongest most easily attached and dismantled of them all.

Wise operators are standardizing on International "IDECO" All Steel Equipment Complete Steel Rigs—from mudsill to gin pole.



IDECO Patented Hook Bolt Re-enforcing

The International Derrick & Equipment Co.

Columbus, Ohio — Torrance, Cal.

Dallas Denver Tulsa Shreveport Houston Casper
Bakersfield Tonkawa Oil City Wewoka Smackover
Eldorado, Kansas Wichita Falls Los Angeles Corsicana
Mexia New York Seminole Drumright Okemah
Amarillo Panhandle

National Supply Company of California

EXPORT REPRESENTATION

30 Church St., New York
Columbus, Ohio Los Angeles San Francisco

The largest company devoted exclusively to the manufacture of steel (galvanized) equipment for the oil, gas and artesian industries

INTERNATIONAL STEEL IDECO DERRICKS (GALVANIZED)

LONG-HEADED

MORE POWER TO YOU!

CLARK GA

BUSINESS MEN
buy "CLARKS" for their extra value

A more conservative buying policy is being established in the Oil Industry. True worth and value must be exemplified by service and performance in all purchases. Operators refuse to accept products which have not been proven as of recognized merit.

An example of this new trend in buying is the steadily mounting sales records of CLARK Gas or Gasoline Drilling Engines.

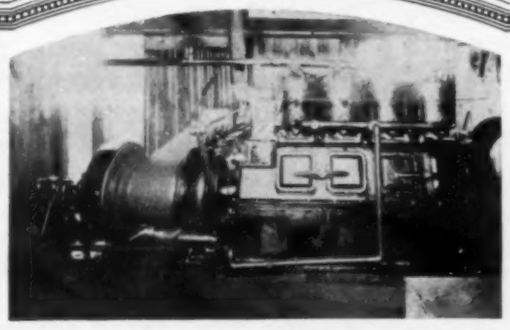
Purchasers *know* what to expect from Clark Engines in the way of performance, and what to expect from their makers in the way of service after the engine is sold. No organization in the oil country stands more solidly behind its sales than do the manufacturers of the ***first*** exclusive drilling engine.

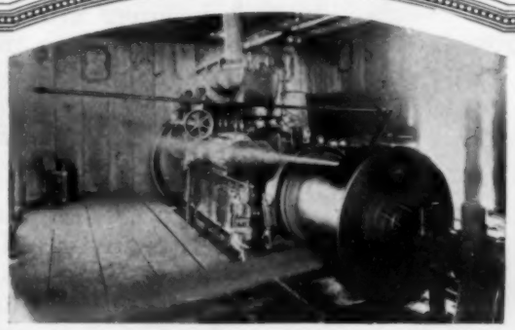
That is why more and more, the ***business*** men of the Oil Industry are turning to Clark Engines for the features and advantages that mean extra value in drilling equipment.

An example of the type of men who are buying Clarks is Mr. D. W. Franchot, of D. W. Franchot & Company, whose two Clark Senior Engines are shown below, in operation on their Lynn Farm leases near Garber, Oklahoma.

We shall be more than pleased to mail you our latest bulletin on the Clark Senior Drilling Engine, describing its operation. This bulletin also carries a list of users of Clark Engines in Mid-Continent Fields, any of whom we would be glad to give as reference. Write to Clark Bros. Company, Olean, N. Y., or 125 W. First St., Tulsa, Oklahoma. Also distributed in California by Smith-Booth-Usher Company, 225 S. Central Ave., Los Angeles, and 50 Fremont St., San Francisco.

CLARK BROS. COMPANY
OLEAN, New York

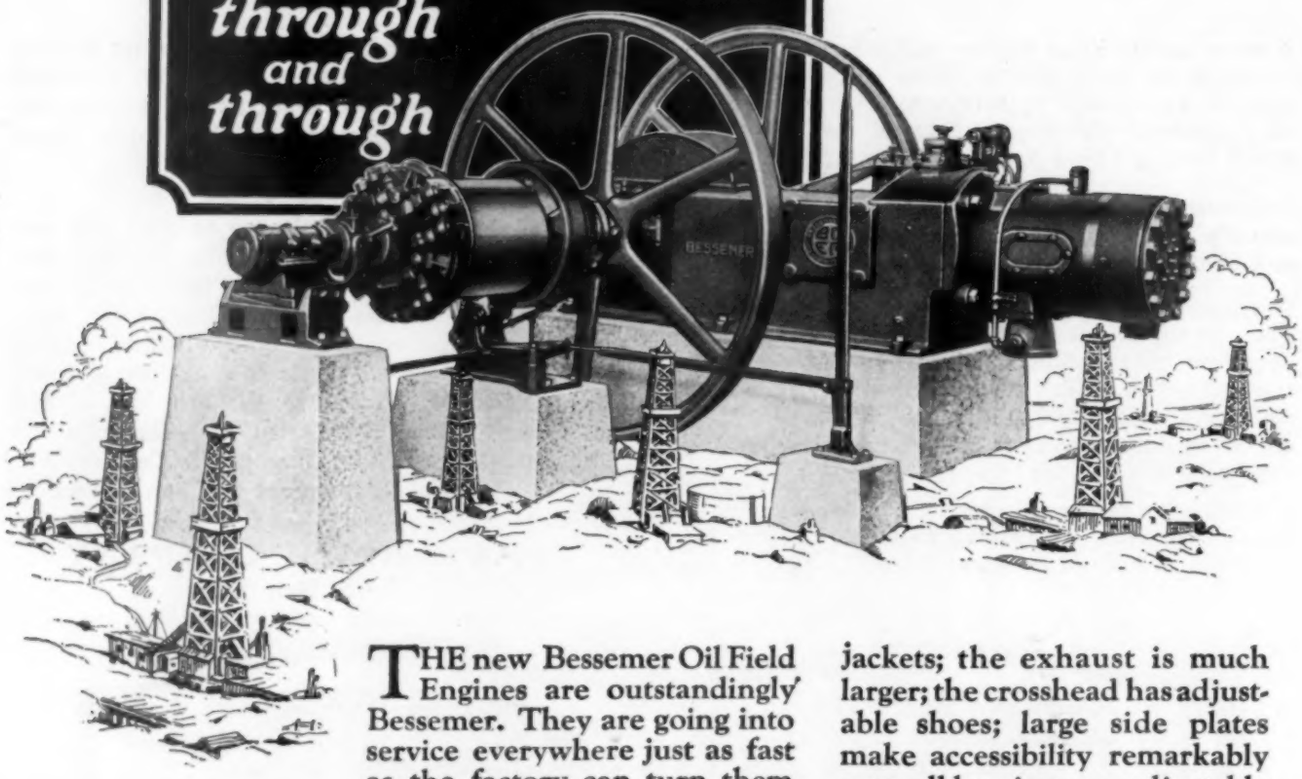




Clark Bros. Co. OLEAN, N. Y.

S ENGINES

It's a BESSEMER through and through



THE new Bessemer Oil Field Engines are outstandingly Bessemer. They are going into service everywhere just as fast as the factory can turn them out to meet the fast growing demand.

Oil men who see them in action are instantly sold, and no wonder. They are entirely enclosed; they combine force feed and splash lubrication; the air valve is on top of the bed plate; they have cleanout type cylinders and easy to clean water jackets; the exhaust is much larger; the crosshead has adjustable shoes; large side plates make accessibility remarkably easy; all bearings are adjustable and removable, and every part is built over strength of the best materials that can be obtained.

There can be no question about the new Bessemer Oil Field Engine being far in advance in Oil Field Engine construction. It's a typical Bessemer—through and through.

THE BESSEMER GAS ENGINE COMPANY
62 York Street ∴ ∴ Grove City, Pa.

California Branch: 727-728 Standard Oil Bldg., Los Angeles
California Distributors: Associated Supply Co., San Francisco—Los Angeles

BESSEMER

BESSEMER OIL FIELD ENGINES – COMPRESSORS VACUUM PUMPS – ROLLER PUMPING POWERS

Say you saw it in The OIL WEEKLY

PITTSBURGH SEAMLESS

Pittsburgh Seamless Quality In All Casing Sizes

Operators have used single lots of Pittsburgh Seamless Drill Pipe repeatedly for a large number of deep well jobs and have marveled at its trouble-free performance. This same superior quality that has always been built into our tubular products is now available in all sizes of casing up to 12½ inches in diameter.

From Solid Steel Ingots To Finished Casing

Our marvelous new Pilger Mill takes a solid steel ingot, pierces it into hollow billet form, and this hollow billet is pilgered (forged) to the diameter of casing desired and in lengths limited only by railroad facilities. Only the best steel may be used in this process, and the finished product is of wonderful texture and strength.

Pipe Storage Yard at Memphis

Our large pipe storage yard at Memphis together with warehouse stocks at other convenient points enable us to give excellent service to the Mid-Continent, Gulf Coast and California fields. Inquiries will be appreciated and receive prompt attention.

Pittsburgh Steel Products Co.

Pittsburgh — New York — Detroit — Chicago

Second Natl. Bank Bldg., Houston, Tex.

Atlas Life Bldg., Tulsa, Okla.

Pacific Coast Distributors Buck & Stoddard, Los Angeles, Cal.

The block that's built on sound engineering principles.

Regan
Traveling Block

Individual pin for each sheave.

Each pin rotates with its sheave.

Two bearings for each sheave.

Rigid construction.

No strain upon bearings.

Block will travel at high speed.

Ask About It

Regan
Forge & Engineering Co.
Manufacturers of Oil Well Equipment
San Pedro, California U.S.A.

Houston, Texas
1521 Post-Dispatch Bldg.

Tulsa, Okla.
227 Mayo Bldg.

New York City
75 West St.

Tampico, Mex.
J. W. Allen, Apdo 1064

Maracaibo, Venezuela
Wm. Adams, Care American Consul

THE NAME IS A LUCEY GUARANTEE

Wherever there's Oil

From the Derrick to the bottom of the hole—

LUCEY

ROTARY DRILLING EQUIPMENT

Spells "QUALITY"

LUCEY MANUFACTURING CORPORATION OF TENNESSEE

General Office and Manufacturing Plant
CHATTANOOGA, TENNESSEE

DISTRIBUTORS:
LUCEY PRODUCTS CORPORATION
EXPORT: 3505 Woolworth Building, New York, N. Y.
DOMESTIC: Brady & Detroit Streets, Tulsa, Oklahoma
416 West Eighth Street, Los Angeles, Calif.
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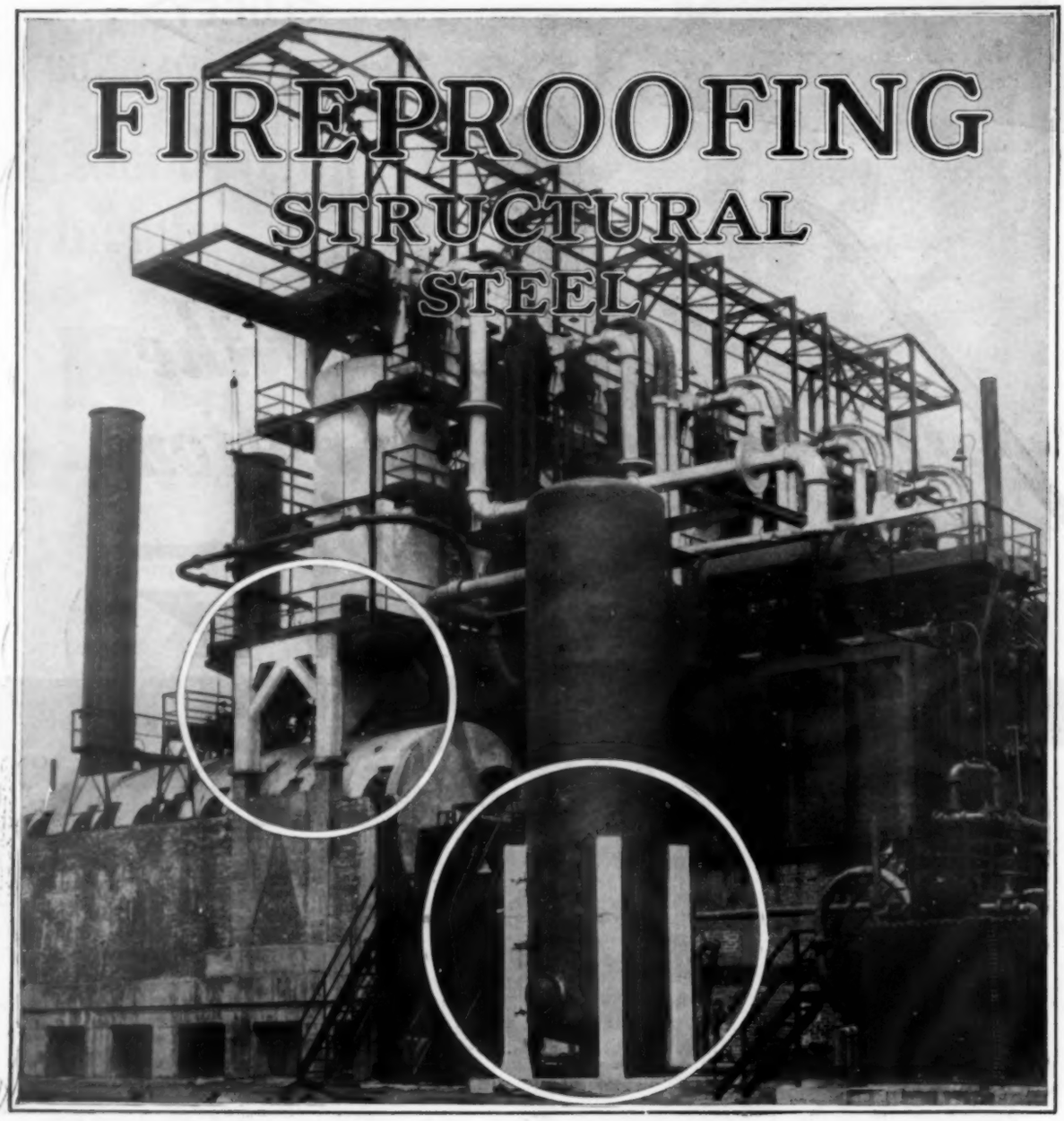
George J. Hausen, Taft, Calif.

Say you saw it in The OIL WEEKLY

FIREPROOFING STRUCTURAL STEEL



Johns-Manville Fireproofing. Note supporting legs of tank in foreground, knee braces and girders of tower supports, and supporting members of partial condensers above towers.

JOHNS-MANVILLE Fireproofing for structural steel has proven its value under the most severe conditions. Overhead apparatus, which would surely have collapsed due to weakening of steel supports, has, by this treatment, been preserved through fires that would otherwise have meant complete destruction. Use it also to insure the continued operation of remote control valve rods which might otherwise be disabled by flame.

JOHNS-MANVILLE INC., 292 Madison Ave. at 41st St., New York City
Branches in all large cities For Canada: Canadian Johns-Manville Co., Ltd., Toronto

Through Asbestos and its allied products
INSULATION
BRAKE LININGS
ROOFINGS
PACKINGS
CEMENTS
FIRE PREVENTION PRODUCTS

JOHNS-MANVILLE

Oil Industry Department

Say you saw it in The OIL WEEKLY

What Happens?

—When Your Machinery Starts and Stops

Much of the wear and tear on machinery comes from starting and stopping. For then the fluid film of lubrication is broken, ***and unless you are using the right lubricant,*** friction takes a heavy toll.

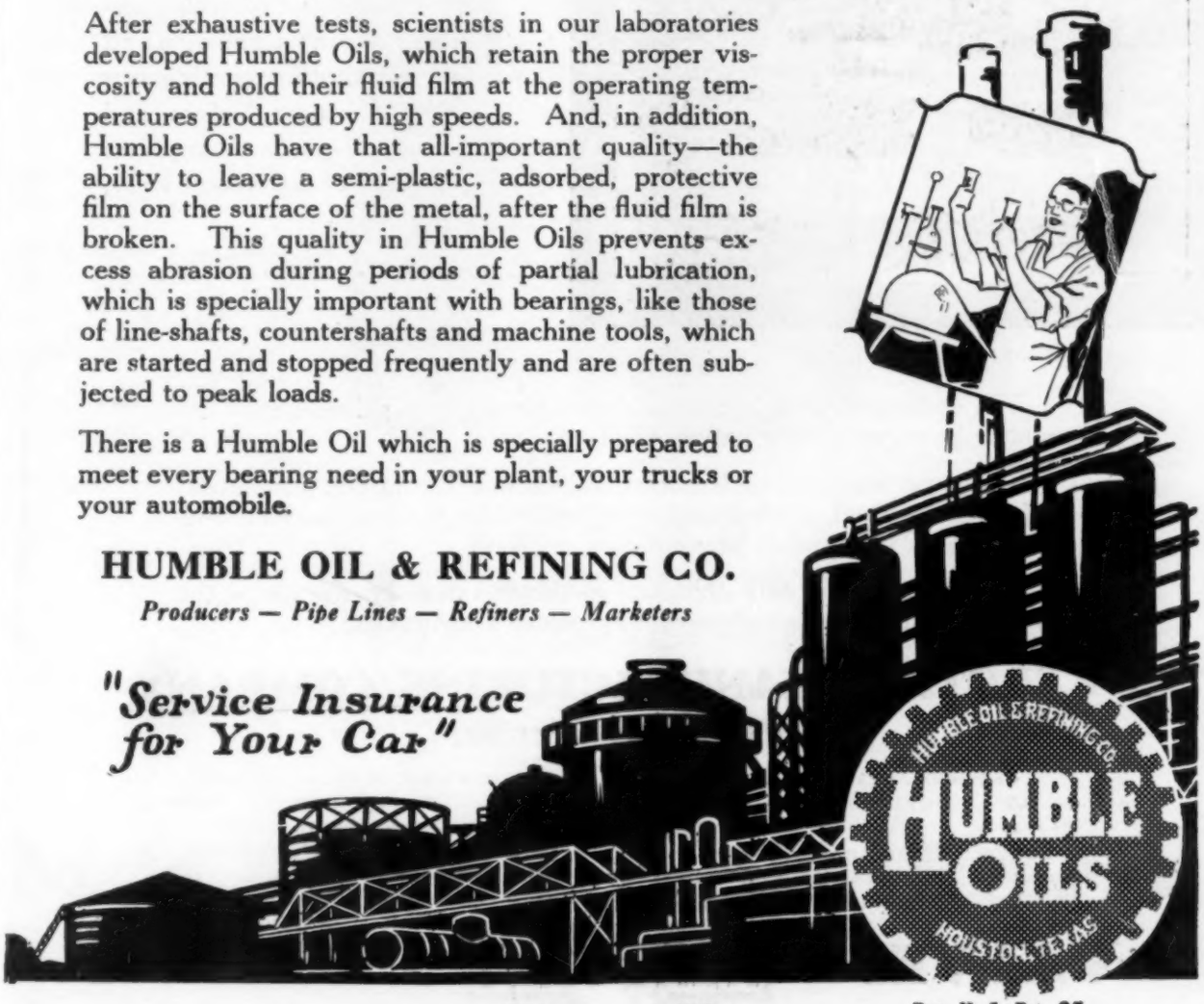
As long as the fluid film is intact, the quality of the lubricant is not so important—but when the fluid film breaks, as it does every time you start and stop a machine—the quality of the lubricant supplied to the bearings is of prime importance, if friction is to be kept from doing serious damage.

After exhaustive tests, scientists in our laboratories developed Humble Oils, which retain the proper viscosity and hold their fluid film at the operating temperatures produced by high speeds. And, in addition, Humble Oils have that all-important quality—the ability to leave a semi-plastic, adsorbed, protective film on the surface of the metal, after the fluid film is broken. This quality in Humble Oils prevents excess abrasion during periods of partial lubrication, which is specially important with bearings, like those of line-shafts, countershafts and machine tools, which are started and stopped frequently and are often subjected to peak loads.

There is a Humble Oil which is specially prepared to meet every bearing need in your plant, your trucks or your automobile.

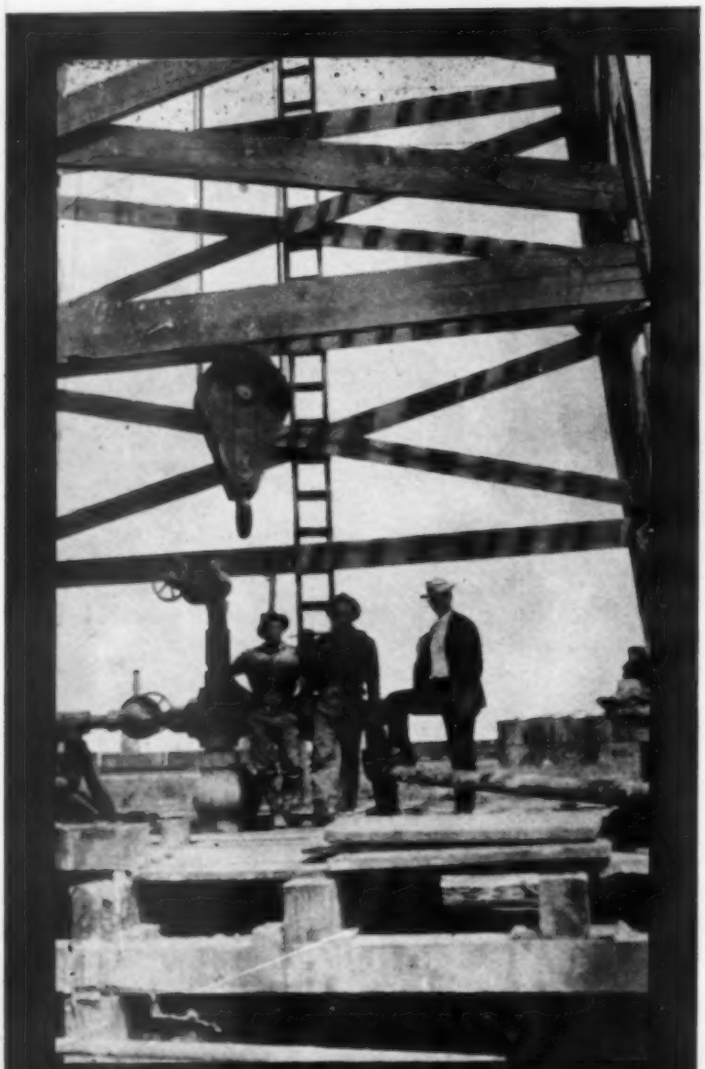
HUMBLE OIL & REFINING CO.

Producers — Pipe Lines — Refiners — Marketers



"Service Insurance for Your Car"

Reg. U. S. Pat. Off.



Safeguarding Fortunes in Oil

Everytime a well goes wild, a fortune in oil goes up in a roaring black cloud never to return—a dead loss to the world as well as the operator.

Foresighted oil well operators always safeguard against this contingency with Kerotest Valves and Fittings—made to imprison the fury of the wildest wells.

The operators, thus conserve and control every gallon of oil, no matter how generously nature yields it.

The super strength of Kerotest Valves and Fittings is guaranteed by its nickel steel construction and certified by the famous Kerosene test under 2500 pounds pressure.

It's better to be safe than sorry—always specify *Kerotest*—the world's standard heavy duty drilling valves and fittings.

KEROTEST MANUFACTURING COMPANY
Pittsburgh, Penna.

Carried in Stock and Sold By

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco

NORVELL-WILDER HARDWARE CO.
Houston Beaumont Shreveport

OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming

EXPORT DISTRIBUTORS
OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

VALVES KEROTEST **FITTINGS**

Say you saw it in The OIL WEEKLY

EMVEE Conservation TANKAGE

EMVEE SIGHT FLOW SEPARATORS

Deliver all the oil to the pipe line with no loss in handling.

Conserve all the gas for lease operations.

Dispose of the saline fluid without muss.

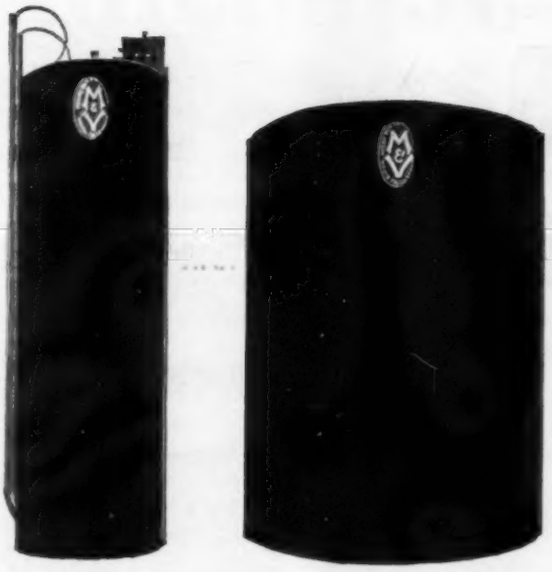
Reduce the B. S. to the minimum.

Work automatically and are easily operated

Enable producer to keep back-pressure on his wells and YOU CAN SEE THEM PUMP.

Sizes: 16 Bbl., 24, 50, 100 and 130 Bbl.

(For average capacity for 24 hours, multiply by seven.)



"EMVEE'S" ARE A PROTECTION TO THE INCOME AND AN ORNAMENT TO THE PROPERTY

EMVEE WELDED TANKS

—are ACTUALLY, not THEORETICALLY gas tight.

Made of heavy, rust resisting copper steel, welded into one seamless unit.

They can not possibly leak or seep and there can be no evaporation or loss of gravity.

"Emvees" are 40 to 80 per cent heavier—strongly reinforced, easy to move and beautifully proportioned.

Equipped with M & V vacuum and pressure valves and thief hole.

Stock sizes: 65 Bbl., 100, 150, 200 and 250 Bbl.

M & V TANK COMPANY

Wichita Falls, Texas

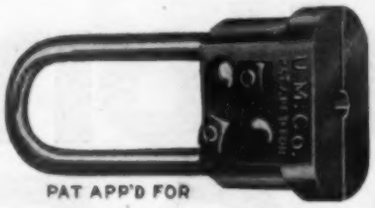
Branches at

Olney Vernon Nocona Cross Plains Amarillo Panhandle

Say you saw it in The OIL WEEKLY

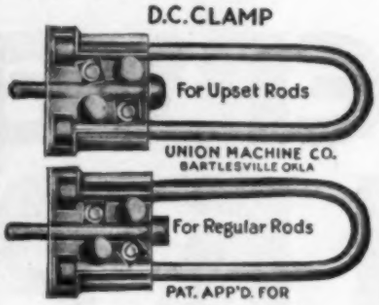
Look 'em Over

DURNELL SAFE COMBINATION CLAMP

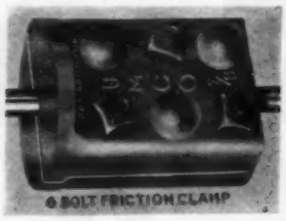


Features—Wide "U" U-heads cannot slip. Smooth knock off face. Made for upset and regular pull rods.

D.C. CLAMP



6 BOLT FRICTION CLAMP

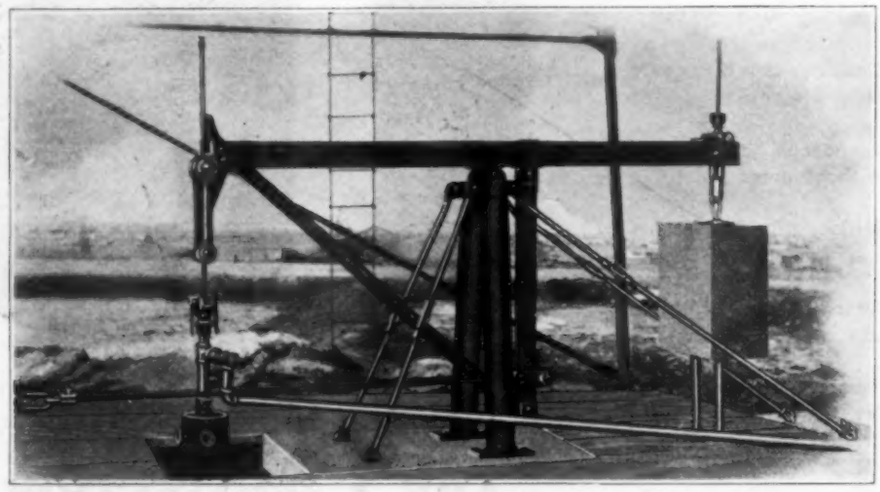


DURNELL KNOCK OFF BLOCK

THE ORIGINAL MADE OF IRON

SIMPLE, IS IT NOT?

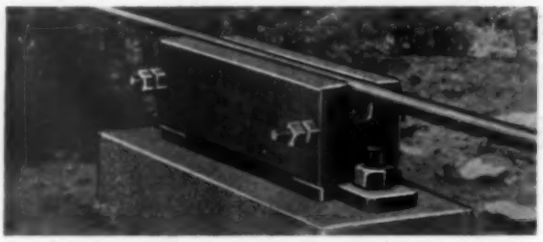
Stirrup Box for 6⅝ Casing Swings, Closed or Open End



DURNELL COUNTERBALANCED PUMPING BEAM

Patent Applied For

Pumps Easier, Long Stroke. The weight does the work. Saves rod lines.



CHEAPER THAN WOOD

UNION MACHINE CO.

BARTLESVILLE, OKLA.

Stamina Counts in the Oil Industry!

STRENGTH, RIGIDITY, POWER OF ENDURANCE—THESE ARE THE FACTORS WHICH DETERMINE THE ULTIMATE COST OF YOUR VALVES.

The increasing necessity for lower operating costs in the oil industry is constantly influencing the installation of only such equipment as will render continuous satisfactory service with the least amount of attention and minimum maintenance expense.

LUNKENHEIMER "CLIP" GATE VALVES

have earned their place among the preferred equipment by paying their way in economical and trouble-free service.

They are sturdily constructed of the very best materials; Iron Body Bronze Mounted for steam, water or oil service, and All-Iron for handling fluids which attack bronze but not iron.

Lunkenheimer "Clip" Valves not only withstand 100 lb. W. S. P., but also the stresses caused by expansion and contraction, vibration, weight and settling of the pipe, and other severe service conditions.

Simplicity of design permits of quick and easy disassembling for cleaning or repairs, and the renewability of all parts subject to wear materially prolongs the life of the valve as a whole.

Distributors of Lunkenheimer Products are located in all oil producing centers. They can fill your requirements promptly from stock.

AMERICA'S BEST
LUNKENHEIMER
"QUALITY"
SINCE 1862

The Lunkenheimer **"Guide to Better Service"** is a handy reference book, conveniently arranged to enable you to find at a glance, Valves and Engineering Appliances for any service. **A copy of this interesting book is yours for the asking. No obligation. Just fill in and mail coupon.**

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"QUALITY"
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NEW YORK CHICAGO BOSTON PITTSBURGH
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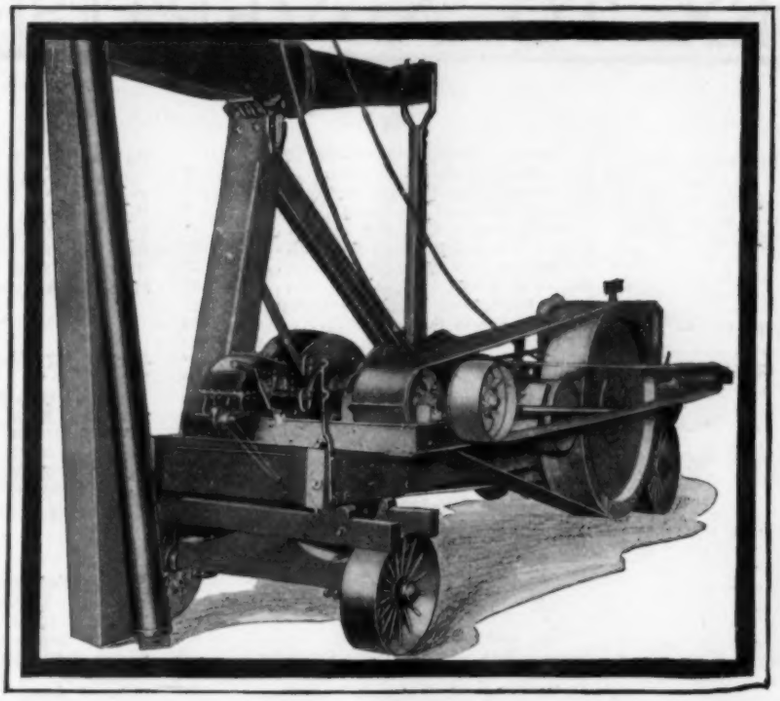
LONDON
EXPORT DEPT. 129-135 LAFAYETTE ST. NEW YORK

THE LUNKENHEIMER CO. "QUALITY"
Please send me, without obligation, copy of "Guide to Better Service." J.D.
P. O. Box 876, Cincinnati, Ohio
Name
Firm
Position
Address

5-28A-90.

Yes Sir, those bits cut COSTS in the "Red-Bed" district
The More Costly the Well—
—The More You SAVE With This Drill.
—Formations that quickly eat away the cutting edge of ordinary bits give THE STANDARD COLLAPSIBLE ROTARY DRILL AND CORE BARREL an opportunity to PROVE its REAL value.
—Scientifically heat treated cutters make more hole per "change," and cost less NEW than many of the current "re-dressing" processes.
—Each "change" requires but 20 to 30 minutes THROUGH THE CENTER of the drill stem, instead of many wasted hours pulling long strings of drill pipe.
—in Every Test
—This improved drill has done MORE than we have promised for it—and is winning the respect of every oil man "on PERFORMANCE."
Write for information
THE STANDARD COLLAPSIBLE ROTARY DRILL AND CORE BARREL
Manufactured by
Standard Collapsible Rotary Drill Co.
O. M. CARTER President
206-7-8 Scanlan Bldg., Houston, Texas.
GEO. S. DURANT Secretary

Say you saw it in The OIL WEEKLY



NEW STAR "C" TYPE MACHINE

For New Drilling and Cleaning-Out

Has two-speed reversing transmission that permits the same flexible control as steam power.

The Double Belt System, a proven shock absorber, relieves the machine and power unit of shock.

Star "C" Type Machines can be furnished without regular power unit for use with a tractor or other separate power.

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Magnolia Petroleum Co. derricks at Wewoka, Okla.

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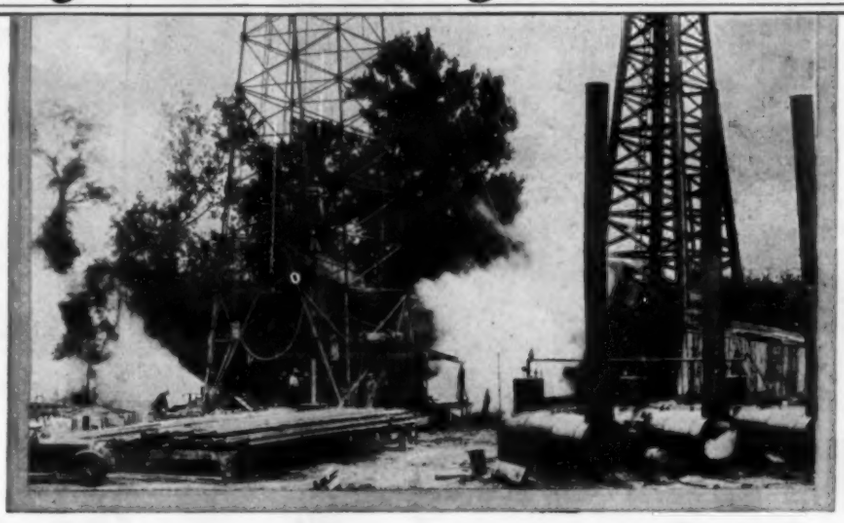

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November 26, 1926 Volume 43, Number 10

The OIL WEEKLY

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WORLD'S OLDEST AND LARGEST MANUFACTURERS OF OIL FIELD EQUIPMENT

Say you saw it in The OIL WEEKLY

Start Three Ten-Inch Pipe Lines To Serve Panhandle

Will provide 115,000 barrels capacity by spring; Humble will treat oil before putting into line

By H. H. KING
Staff Representative

THREE ten-inch lines, each having capacity of 30,000 barrels daily, are to be made available by next spring for transportation of crude from the Texas Panhandle district. These lines are to be built by the Humble Oil and Refining Company, the Magnolia Pipe Line Company, and the Gulf Pipe Line Company, and will connect with lines extending to the terminals of the respective companies on the Gulf Coast.

The Prairie Pipe Line Company has been at work since September on an eight-inch welded line from a tank farm at Kingsmill in the Panhandle to Ringling, Oklahoma, a distance of about 200 miles.

The three lines will approximate a capacity of 115,000 barrels daily.

Both Gulf and Magnolia made public their intentions of building to the Texas Panhandle late last week, and each will start work on opposite ends of their proposed lines. Except for one being made up of screw pipe and the other welded points, the lines to be built by Gulf and Magnolia will be almost duplicates, while the same general course across the plains section of the State will be traversed by these two carriers.

Gulf's 10-inch carrier will begin from the lower end of its present Panhandle gathering system and tank farm near the town of Panhandle, Carson County, and tie into its Central West Texas pipe line system at Ranger, a total distance of 235 miles.

Magnolia Line 252 Miles

Magnolia's line will extend from its tank farm at Kingsmill, located on the Carson-Gray County line, to Olden, where an eight-inch line moves shallow oil production in the Olden field and other fields in the district to Corsicana, thence to Beaumont. This project will require 252 miles of 10-inch pipe to link the Texas Panhandle district with the Central West Texas trunk line system, and at present there is no crude available between the two districts.

Official announcement of Humble's line, which was mentioned in these columns last week, was made Tuesday in the following statement:

"Humble Oil and Refining Company today announced the completion of plans for the construction of a pipe line to give an outlet from the Panhandle producing areas to their terminals at Texas City and Baytown. The proposed construction will provide the means for handling from the Panhandle area approximately 30,000 barrels per day; and the increasing to a total of 120,000 barrels, their main line capacity from the North, West and Central Texas areas into their terminals. The money involved to complete the program is approximately nine and a half to ten million dollars.

"In making this new construction and expenditure of this money, the Humble Company is following its established policy of endeavoring to give adequate pipe line service to the producing areas of the state."

Humble Line 315 Miles

The Humble line will be screw pipe and will extend from the Humble tank farm in the Panhandle to Comine, a distance of 315 miles. It will mean increasing the line capacity from Comine to Hearne from 70,000 to 100,000 barrels per day. It also would be necessary to increase the facilities from Hearne to the Webster tank farm from 100,000 to 130,000 barrels per day.

The company is now increasing the capacity of its line from Kempner to Comine by 10,000 barrels per day, working the line up to 40,000 barrels capacity. It has just completed increasing its facilities from Comine to Hearne by 20,000 barrels, making the new capacity of the line 70,000 barrels per day. It also has completed a 20,000 barrel capacity line from Kempner west to McCamey and is now extending lines for gathering purposes 25 miles northwest of McCamey.

Six pump stations will be erected on the new line, besides the added facilities required to increase capacity of the existing lines with which it will connect.

Will Treat Oil

It is probable that the Humble will process the Panhandle crude it will handle, before putting it through the line. It is figured that by cracking the crude and then remixing, the gravity will be raised from 38 per cent to 41 per cent, by breaking down the wax, and that it will be easier to handle through the line.

Consequently, the 10,000 barrel refinery which the Humble Oil & Refining Company will build at Panhandle, will be a cracking plant, using the tank and tube process now used by the Humble at its Baytown plant near Houston.

A contract has been made by the Humble Oil & Refining Company to supply approximately 1,000,000 barrels of fuel oil per year to the Southern Pacific railroad from the refinery which the Humble Oil & Refining Company will build at McCamey, Texas. The capacity of this refinery, which will be simply a skimming plant, will be from 5000 to 8000 barrels per day.

Pipe Ordered

The order for the ten-inch pipe to be used in constructing the Magnolia Pipe Line Company's line was placed last week with the National Tube Company, and deliveries are to start as soon as possible.

Eight-inch pipe is the largest size used heretofore by Magnolia in its trunk line system, but the ten-inch pipe was selected for moving Panhandle crude, owing to congealing qualities of the oil when exposed to low temperatures.

Contracts will be let shortly by Magnolia for the stringing of the pipe along the right-of-way, and the ditching and backfilling of the pipe trench is also to be done by contractors. The welding and insulation of the pipe is to be done by Magnolia's organization, which is recruited almost full strength at presnt, due to the company having just completed 175 miles of eight-inch welded line from Luling to the Mirando district. Magnolia had gotten well underway on the construction of its eight-inch welded oil line from Smackover, Arkansas, to Beaumont, a distance of 265 miles, when its welding forces were split or put to work on the Luling-Mirando extension.

Including the Smackover-Beaumont trunk line, Luling-Mirando extension, and the new Panhandle trunk line, Magnolia will have started a total of 692 miles of eight and 10-inch lines during the present year, and all but the Panhandle unit are in operation. Magnolia has led all other Mid-Continent pipe line companies so far this year on expanding its transportation system.

Magnolia's line to the Panhandle will be well protected from the destructive elements in the soil, as is usually the case with all of its permanent

lines. Magnolia applies a light primer coat of paint, then after drying a heavy coat of hot dope is put on and wrapped in paper. A second coat of hot dope is then put over the paper to insure water proof.

Six pump stations are being planned for Magnolia's Panhandle line, with the stations spaced from 30 to 60 miles apart. The location of these stations will not be picked until the right-of-way is purchased for the line. Since Magnolia practically standardizes on De La Vergne engines and National Transit pumps it is believed that these two concerns will furnish the pump station equipment when orders are placed shortly. Two 55,000 barrel tanks are to be erected at each station for working tanks, while it is planned to keep the oil moving through the line, as is the plan of Prairie Pipe Line Company on its Panhandle trunk line, rather than to relay the oil at intervals.

Magnolia is not making any provision for heating the oil in its 10-inch carriers at the start, but may adopt a heating method before an attempt is made to operate during the winter months.

Magnolia's line in leading out of the field pump station and tank farm at Kingsmill, Gray County, will have a surface elevation drop of abuot 1900 feet on the first 60 miles, and it is due to this aid of gravitation that pump stations will be scattered at irregular intervals.

Magnolia Big Line Builder

The invasion of the Texas Panhandle district with a pipe line by Magnolia has been considered quite likely, owing to the company following out its usual policy of going into new flush fields with large steel tank farms and local gathering lines, and accumulating crude until total stocks and daily crude runs warrant direct pipe line connections. Such practice has been illustrated in recent years at Luling, Smackover, Bull Bayou, Mirando and now the Texas Panhandle. However, Magnolia's line to Panhandle came earlier than expected, since the Magnolia Petroleum Company has only about 400 barrels of its own production in the Panhandle district, and current crude runs of the Magnolia in the district only average 10,000 barrels daily.

Magnolia has accumulated approximately 2,000,000 barrels of Hutchinson and Gray County crude at its two tank farms at Kingsmill since making its first crude run on March 17, 1926, through a six-inch line from Hutchinson County to Kingsmill. Magnolia has 31 55's completed and filled on its tank farm in the southwest part of section 178, block 3, I. & G. N. survey, and 12 tanks of the same capacity completed and partly filled on tank farm No. 2 in the east half of section 159. Six more tanks are building on the latter farm, making a total of 49 55's completed and building to date, while a number of others will be added before the trunk line can be completed next spring.

Preliminary estimates on the daily capacity of Magnolia's Panhandle line are placed at 35,000 barrels daily during the summer months, while this capacity is expected to drop to about 25,000 barrels daily in the winter. It is planned to carry a pressure of about 600 pounds on the line on the average, although it will run much higher during the winter.

Screw pipe is to be used on the Gulf Pipe Line Company's 10-inch carrier heading out of the Texas Panhandle district, and work gangs are being recruited to speed up the work and have the line in operation early next spring. Two pipe screwing machines have been ordered by Gulf, and four ditching machines will be put to work as soon as the equipment and workmen can be assembled.

Gulf's ten-inch line will contain approximately 120,555 barrels of oil when completely filled, while Magnolia's line will require about 129,276 barrels to load up to capacity. These figures are based on 513 barrels capacity per mile of 10-inch pipe.

Considerable research work has been conducted by W. F. Rollins, superintendent in charge of Gulf Pipe Line Company in the North Texas district, and his assistants on determining the temperature of the soil at various depths below the surface in the Texas Panhandle district. This investigation reveals that there is little advantage to be had in burying a pipe line greater than 40-inches below the surface, since the temperature of the soil only varies from one to two degrees between 24 and 48-inches below the surface.

Gulf's main line is to be buried in a 40-inch trench, which will be 18 inches in width. A primer coat of paint and a heavy coat of protective dope to serve as insulation will be applied to the line.

Four rivers are to be crossed in building across the Texas Plains, and several of these crossings are somewhat wide and difficult to negotiate.

Gulf is planning to build five main line pump stations, besides the stations also in use on the Panhandle section of its completed unit, and an average pressure of 600 pounds is to be kept on the line when pumping oil. The pump stations are to be uniform in construction, and each will be equipped with two 200 H. P. De La Vergne engines, and a pair of Gould 5½x20 horizontal pumps of 10,000 barrels daily capacity each. Considering that the surface elevation between the Panhandle tank farm and Ranger pump station takes a drop of about 2000 feet, it is estimateed a standing pressure of about 800 pounds will be on the line at the Ranger end.

Steam Heaters

A special type of steam heaters for raising the temperature of the Panhandle oil to a free flowing condition during extreme cold weather has been perfected by Gulf's engineers, and heating units will be installed at the Panhandle field station and another about mid-way the length of the line. These heaters are expected to provide Gulf with a uniform daily capacity of 30,000 barrels on the line throughout the year, while other heaters will be added if required. Two working tanks of 55,000 barrel capacity each are to be

(Continued on page 44)

Producing Executive Gives Views on Market Situation

What kind of situation do we face during the coming twelve months?

The OIL WEEKLY has been asking this question of a number of well posted oil men. Below is given a resume of what one executive thinks about it:

"My theory is that, with the production situation as strong as it is, plus the practical certainty of more imports to contend with, plus the fact that during the first part of this year we had comparatively low production, and even considering the strong increase in 1926 consumption, there will be such a slight draft on total stocks that for some time to come we will have something in the nature of our present prices.

"While gasoline stocks have been drawn on materially, total stocks of petroleum and petroleum products will see a very slight withdrawal this year.

"I have this hope—if the present price structure discourages drilling effort, we will go into the spring with less threats on the horizon than now. Seminole boom should be punctured by spring. If drilling effort is lessened, and we have less 'threats', then we may expect a better price in the spring."

However, he declared that there is more oil shut in now than there has ever been before. He cited California as an example, and asserted that if it were not for the fact that Salt Creek operators are holding back production, the output from the Salt Creek field could be three times its present amount. Seminole curtailment, he added, was holding back still another large amount of possible production.

"The situation is fundamentally sound," he continued, after beginning his statement with the assertion that the market was "sick" from overproduction. His greatest fear is that we shall go into the first of the year with a production running around 2,300,000 barrels per day, and his remedy for this situation was the suggestion that drilling effort be reduced.

On the other hand, he said that due to the scattered new fields that have been brought in during the past twelve months, especially in West Texas and the Panhandle, there seems to be little likelihood of a let up of drilling in those sections.

Seminole Agreement Continued To November 29

Pipe line capacity now equal to full production of completed wells and only drilling is affected

By GRADY TRIPLETT
Staff Representative

Tulsa.—After two sessions of the Seminole field shut down committee here Monday it was announced that the original agreement to prorate oil runs and hold back all wells on the top of the sand would continue in effect until November 29. At Monday's meeting R. A. Griffiths, president of the Sinclair Oil and Gas Company, served as chairman in the absence of E. B. Reeser, president of the Barnsdall Corporation, who was away from Tulsa at the time. While the order to hold back the 32 restricted uncompleted will be strictly enforced, the ban on the present producing wells has been virtually lifted. That is so long as "no wastage of oil results." At the meeting of the sub-committee Saturday this modification was made. Umpire Ray Collins has been given orders to enforce this provision at his discretion.

Apparently such action was wise and in order since there is now sufficient storage and pipe line facilities to take care of a larger amount of oil than when the agreement was made.

The pipe line capacity from the field is now about 104,000 barrels. By the middle of December this will probably have been increased to some 150,000 barrels. In the meantime steel storage will take care of the balance. All the operators are working at a fast rate on their tank building program. The Tidal has constructed a loading rack and is shipping out a portion of the oil by tank cars.

After the lift of the proration on present producing wells Saturday the operators immediately set about to bring them back to full production. Recourse was taken to deepening, swabbing, agitation and the like to stimulate production. All pinched in wells have apparently been revived with the exception of possibly one. That pinching in was the direct cause of the permanent death of any well is a matter of debate.

Effect of Pinching

There is a great deal of difference of opinion as to whether or not the ultimate effect of pinching in the Wilcox producers at Seminole will be permanently disastrous. Production from the field has fallen off materially since the wells were choked down. The opinion might very well be ventured that this was due principally to the natural decline of the gusher pool as a result of its natural characteristics rather than pinching in the wells. It has been demonstrated that the application of back presssure does not necessarily cause the wells to go dead by the fact that restricted wells have been revived and brought back as producers.

The wells producing from the Wilcox pay at Seminole are more than 4000 feet deep and it takes considerable gas to lift a column of oil that height and make the wells flow. The amount of gas found associated with the oil at Seminole is very small. Where this gas has subsided or been dissipated, it is expected that the wells will go dead.

The intrusion of water in the Wilcox producers at Seminole is believed by some to be a natural condition due to the apparent association of the water horizon with the pay.

The comparatively large amount of water showing in some of the wells may be due to a local accumulation of it caused by restricting the flow. The opinion has been expressed that the wells at Seminole ought to be produced at a high rate to keep water from accumulating in the drainage area.

In the matter of water in the sand, it is interesting to recall in this connection, Wilcox sand production at Braman, Alcorn, Tonkawa and elsewhere. Water intrusion did not necessarily mean ruin after its presence became a matter of more consideration.

Potentiality of the Seminole area is rife. In not a few operators opinions the field could be made to produce 150,000 barrels by drilling in all the wells now shut down on top of the sand by agreement. It might be reasonable to expect that that figure would be the field's peak. From the action of producers already completed it is likely that any new oil would do little more than maintain production declines caused by the natural depletion of older wells. The fields production by the last 24 hour gauge was 113,206 barrels from 65 wells. Thirty-eight of these were Wilcox wells which produced 104,997 barrels.

Searight District

The future of Seminole depends, it would appear, to a large degree on the potentiality of the Searight district, which is as yet an unknown quantity. Some light was thrown on it during the past week, however, by the completion of the Prairie Oil and Gas Company Grayson 2 in section 33-10-6 for 175 barrels per hour initial.

Although having a large production the sand was found lower in this well than in the large Wilcox flush producer of Searight just north in the same section at the northwest of the northeast of the southeast. The top of the Wilcox was found by Prairie at 4345 and by Searight at 4310.

Of particular interest in the development of the field during the past week was the Carter Oil Company getting a flowing well directly north of the dry hole drilled by Prairie in the heart of the field. Carter's well, the Carter 2, in the southeast of the southwest of the southwest of section 24-9-6, found the Wilcox at 4180 feet and made 185 barrels an hour initial when drilled 14 feet in. The Prairie Oil and Gas failure was their Gross 1 in northeast of the northwest of the northwest of section 25.

DETAILS ON CRITICAL FIELDS

Pool—	Oil Wells Completed	Total Initial Production	Initial Per Well	No. Producing Wells	Daily Production Barrels	Daily Production Per Well	Rigs Up	Wells Drilling
PANHANDLE								
Hutchinson County .	583	381,390	654	550	152,570	277	62	229
Gray County	59	22,745	385	56	9,775	175	15	71
Carson County	63	18,465	313	61	3,715	60	19	30
Wheeler County . .	12	3,115	259	10	530	53	6	13
Panhandle total . .	717	425,715	593	677	166,500	246	102	343
OKLAHOMA								
Seminole*	41	167,895	4,418	38	104,997	2,763	68	170
Earlesboro*	1	4,000	4,000	1	2,500	2,500	10	5
*Applies to Wilcox sand wells only .								
CALIFORNIA								
Huntington Beach T'site	..	..	..	67	36,500	544	18	123
Ventura Avenue . ..	..	..	..	70	58,000	825	13	29
Seal Beach	..	..	..	4	6,400	1,600	2	3
GULF COAST								
Spindle Top	100	494,223	4,942	87	79,550	914	5	29

Million Dollars Paid for Leases Around Winkler Wildcat

Standard of Indiana, Humble and Roxana acquire drilling blocks from Westbrook and associates

By H. H. KING
Staff Representative

San Angelo, Texas. — Three major lease sales involving approximately one million dollars were made within the past seven-day period around the Westbrook wildcat oil producer in Winkler County, West Texas. The largest deal was closed late Monday of this week when the Southern Crude Oil Purchasing Company, subsidiary of the Dixie Oil Company, which is in turn the producing subsidiary of the Standard Oil Company of Indiana in Texas, acquired the discovery well and a total of 1440 acres of checkerboard leases throughout the original block of leases assembled by R. A. Westbrook and associates for a consideration of $510,000. Of this amount $255,000 was paid in cash, and the balance is payable out of one-half of the oil produced.

Humble Oil & Refining Company purchased 1580 acres of leases in six separate tracts lying west and northwest of the wildcat producer from R. A. Westbrook and associates last week for a total consideration of $224,000, and agreed to drill a test shortly on one of the three tracts located northwest of the well, thereby proving up a portion of the remaining leases held by the discoverers. Humble paid $84,800 cash, and the balance, $139,200, is payable out of one-half of the oil produced.

Roxana Petroleum Corporation purchased 880 acres of close-in leases and outlying tracts from J. P. Johnson and Geo. B. McCamey, both of Fort Worth, for a cash consideration of $225,000. Amerada Petroleum Corporation purchased the east 80 acres in the northwest quarter of section 42, Block B-5, from the Eastland Oil Company, Fort Worth, before the above deals were made, paying $200 per acre cash and $50.00 per acre in oil. Atlantic Oil Producing Company bought 960 acres of scattered leases around the Westbrook block late in September from Johnson and McCamey, paying $40,000 cash.

The Westbrook well is flowing about 135 barrels of 30 gravity pipe line oil daily with good gas pressure from sandy-lime pay at 2965-3005 feet, after having passed thorugh two other oil and gas producing horizons. This well is located in the southeast corner of section 42, Block B-5, and the original drilling block assembled by R. A. Westbrook and others, amounted to about 31,000 acres.

The Southern Crude Oil Purchasing Company took possession of the producer, Tuesday morning, and officials of the company predicted that a six-inch pipe line would be built within 60 days to deliver the production to tank car racks, which will be built on the T. & P. Railroad, a distance of about 20 miles. There are no railroads in Winkler County. The Southern is already engaged in buying and transporting crude from the Crane-Upton district, making shipments via tank cars to the Mexican Petroleum Corporation's large plant at Destrehan, Louisiana.

Since the Dixie Oil Company is the producing and lease holding concern for Standard of Indiana, it is assumed that the Westbrook property will be turned over to the former concern, although the purchase was made in the name of the Southern Crude Oil Purchasing Company, with P. Woodruff and W. R. Wheeler, signing the purchase contract.

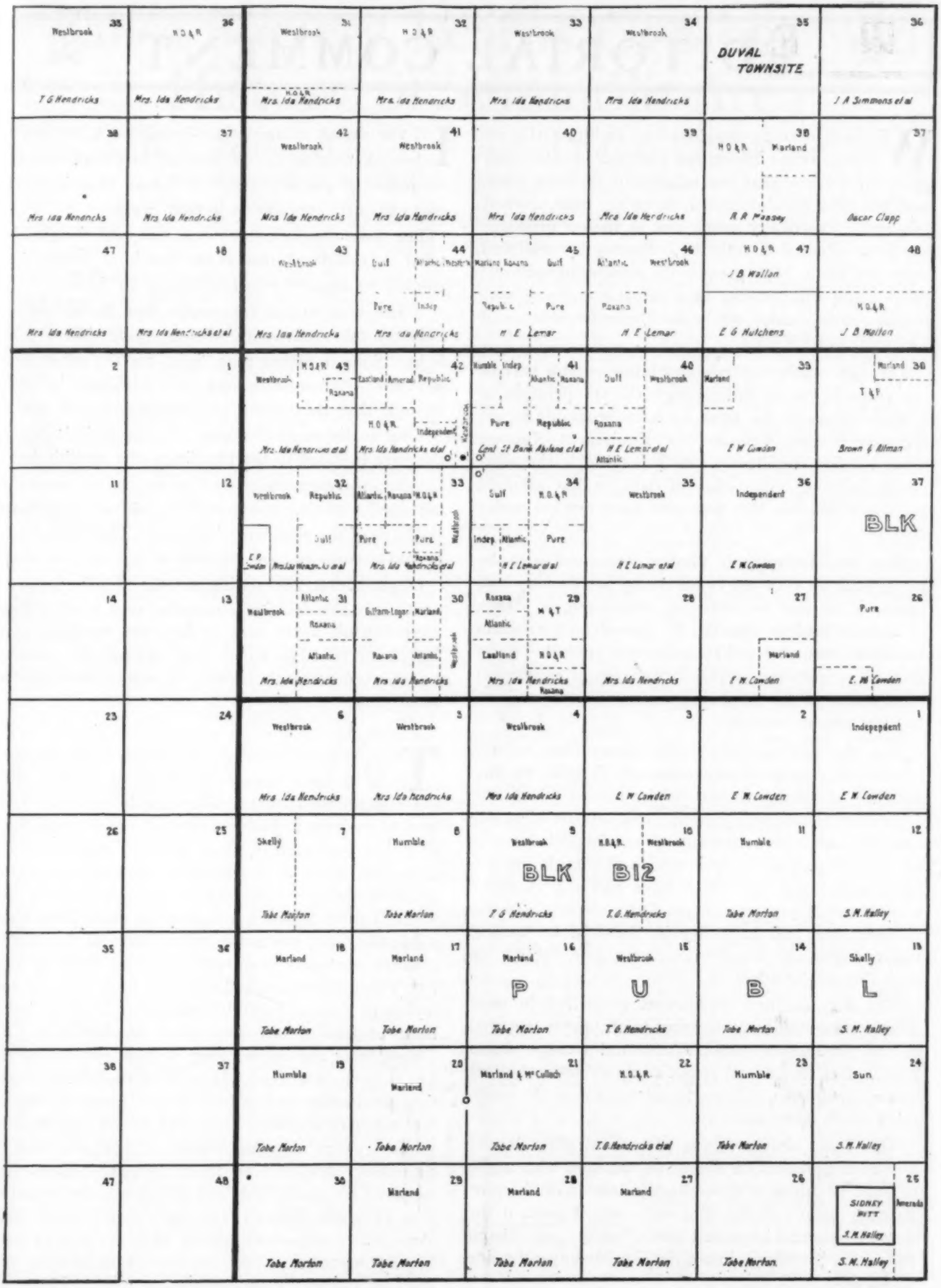
Besides R. A. Westbrook, who made his initial bow as an oil producer with the Winkler County strike, the following individuals and concerns participated in the sale of leases and interest in the producing well: Westbrook & Company, Westbrook Oil Corporation, S. A. Thompson and W. L. Stewart. These parties and concerns still possess about 23,000 acres of scattered leases on the T. G. Hendricks ranch around the producing district in Winkler County.

An active drilling campaign is forecasted for this new producing area with the appearance of a market for the oil when produced, and the Southern is offering a market up to 70,000 barrels daily for West Texas operators drilling within reach of its gathering lines.

The acreage obtained by Humble from R. A. Westbrook is located as follows: all of section 36 and the northwest quarter of section 47, block 27; south half of the south half of section 31, and the southwest quarter of section 41, block 26; 320 acres in block B-12; and all of the northeast quarter of section 43, block B-5, but the south east 40 acres being held by Roxana.

Roxana Petroleum Corporation's purchase of 880 acres of checkerboard leases around the Westbrook producer from J. P. Johnson and Geo. B. McCamey for a cash consideration of $225,000, includes the following leases: SE¼ NE¼ section 43, E½ NE¼ section 41, N½ SW¼ section 40, E½ NW¼ section 33, SW¼ SE¼ section 33, S½ NE¼ section 31, SW¼ section 30, N½ NW¼ section 29, S½ SE¼ section 29, all block B-5; E½ NW¼ section 45, and SW¼ section 46, block 26, Public School Lands.

The robust party on the left with a broad grin is Oscar Yates, driller, who took an active part in the successful efforts of the Westbrook Oil Corporation, Fort Worth, in completing a flowing wildcat producer in Winkler County, L. H. West, tool pusher, is standing at the right.


35 Westbrook T.G Hendricks
36 H.O.&R. Mrs. Ida Hendricks
31 Westbrook H.O.&R. Mrs. Ida Hendricks
32 H.O.&R. Mrs. Ida Hendricks
33 Westbrook Mrs. Ida Hendricks
34 Westbrook Mrs. Ida Hendricks
35 DUVAL TOWNSITE
36 J.A Simmons et al
38 Mrs. Ida Hendricks
37 Mrs. Ida Hendricks
42 Westbrook Mrs. Ida Hendricks
41 Westbrook Mrs. Ida Hendricks
40 Mrs. Ida Hendricks
39 Mrs. Ida Hendricks
38 H.O.&R. Marland R.R Mosley
37 Oscar Clapp
47 Mrs. Ida Hendricks
48 Mrs. Ida Hendricks et al
43 Westbrook Mrs. Ida Hendricks
44 Gulf Atlantic Western Pure Indep Mrs. Ida Hendricks
45 Mariana Roxana Gulf Republic Pure M.E Lemar
46 Atlantic Westbrook Roxana M.E Lemar
47 H.O.&R. J.B Mallon E.G Hutchens
48 H.O.&R. J.B Mallon
2
1
43 Westbrook H.O.&R. Roxana Mrs. Ida Hendricks et al
42 Eastland Amerada Republic H.O.&R. Independent Mrs. Ida Hendricks et al
41 Humble Indep Atlantic Roxana Pure Republic Cont. St Bank Abilene et al
40 Gulf Westbrook Roxana M.E Lemar et al Atlantic
39 Marland E.W Camden
38 Marland T&P Brown & Allman
11
12
32 Westbrook Republic E.P Camden Gulf Mrs. Ida Hendricks et al
33 Atlantic Roxana H.O.&R. Pure Pure Roxana Westbrook Mrs. Ida Hendricks et al
34 Gulf H.O.&R. Indep Atlantic Pure M.E Lemar et al
35 Westbrook M.E Lemar et al
36 Independent E.W Camden
37 BLK
14
13
31 Westbrook Atlantic Roxana Atlantic Mrs. Ida Hendricks
30 Gilfarn-Logar Marland Roxana Atlantic Westbrook Mrs. Ida Hendricks
29 Roxana Atlantic M&T Eastland H.O.&R. Roxana Mrs. Ida Hendricks
28 Mrs. Ida Hendricks
27 Marland E.W Camden
26 Pure E.W Camden
23
24
6 Westbrook Mrs. Ida Hendricks
5 Westbrook Mrs. Ida hendricks
4 Westbrook Mrs. Ida Hendricks
3 E.W Camden
2 E.W Camden
1 Independent E.W Camden
26
25
7 Skelly Tobe Morton
8 Humble Tobe Morton
9 Westbrook BLK T.G Hendricks
10 H.B.&R. Westbrook B12 T.G. Hendricks
11 Humble Tobe Morton
12 S.M. Halley
35
36
18 Marland Tobe Morton
17 Marland Tobe Morton
16 Marland P Tobe Morton
15 Westbrook U T.G Hendricks
14 B Tobe Morton
13 Skelly L S.M. Halley
38
37
19 Humble Tobe Morton
20 Marland Tobe Morton
21 Marland & Mc Culloch Tobe Morton
22 H.O.&R. T.G.Hendricks et al
23 Humble Tobe Morton
24 Sun S.M. Halley
47
48
30 Tobe Morton
29 Marland Tobe Morton
28 Marland Tobe Morton
27 Marland Tobe Morton
26 Tobe Morton
25 SIDNEY WITT S.M. Halley Amerada S.M. Halley

Showing the lease ownership around the Westbrook Oil Corporation's wildcat oil producer in Winkler County, Texas, including late purchases by Humble, Roxana, Amerada and Atlantic Oil Producing Company.

EDITORIAL COMMENT

WHILE nothing developed to facilitate the recovery of oil during the year has been of such great importance that we might say that the business has been revolutionized, there has been marked progress. Practically every tool of the oil producer has been affected directly or indirectly by new and improved items. How great is the number of such improvements will possibly be a surprise to many who will see them catalogued in the December 3 issue of The OIL WEEKLY.

Through much research and labor on the part of our editorial forces and through the co-operation of manufacturers in this field, we have been able to get together in this Annual New Equipment Number what we feel confidently safe in saying is the most comprehensive compilation of data on late oil field tools and practice that has ever been printed under one cover.

That the Industry is vitally concerned with its tools, both as they effect efficiency in recovery and conservation and as costs are considered, is shown in that the leaders, through the American Petroleum Institute, have centered their interest upon this question. The question of standardization of equipment has concerned the Institute for a number of sessions, and the end is not yet.

That the move toward standardization has not arrested progress in the development of tools for the industry is clearly shown in the record which the December 3 issue will present. It is no part of standardization that inventive enterprise should be arrested, but its purpose is to establish standards for the tools and appliances which have had a permanent place through proven utility. The economy is in the manufacture, and in utility in the field by having the material of one manufacturer interchangeable with that of the other.

The data on new equipment presented in next week's issue will be interesting to all people engaged in the production, conservation and transportation of oil. But its interest is not comparable to the real value it will be in helping to solve some of the problems which come up daily.

This issue should find a permanent place in the files of the production executive, the men who aspire to such positions and the handy drawer of the purchasing agent's desk. Not only will it contain the data on new and improved items, but the advertising pages will broaden it into a dependable buyer's guide on oil field equipment.

Be sure that you get your copy, and that you save it.

IN the defeat of Initiative Petition No. 89, popularly known as the oil tax bill in Oklahoma, the oil industry has registered a victory that is worth more than its application in that State.

The way the industry went out and fought for what it considered just at the hands of voters, is a shining example for other States to follow.

It has been stated frequently that the petroleum industry takes too many blows, "lying down." No fight. Submit rather than fight, for the effort may not win. What happened in Oklahoma is proof enough that the voters of a commonwealth are as willing to listen to the plea of a great industry as they are to listen to the pleadings of a spellbinder.

When the measure passed far enough to assure its submission to Oklahoma voters, a shiver went down the back of the petroleum industry. Then somebody, perhaps scores of men, decided to put up a battle.

Organization, advertising and the plea for a square deal made the decision somewhat of a rout. There were 226,053 votes cast against the measure, only 74,228 for it. The silent vote against the measure is expected to reach 75,000. It was a three to one victory.

THE amount of money the larger units are willing to spend to assure them of getting their share of the oil that is available, indicates that those best in position to know are not alarmed at the flood of production at this time. During recent months there has been a most ambitious and continuous program of storage construction. Announcement this week of three ten-inch pipe lines to move Panhandle oil to the Gulf, starts the expenditure of the largest amount of money ever spent in one winter on pipe line construction, and climaxes a busy year of line laying in Texas. In Oklahoma many lines are being built to handle the flush yield of Seminole City. Those lines are not so long as the Texas projects, but they show a trend. Interest of companies in getting production and acreage in the Texas Panhandle has not been abated. This week the Standard of Indiana appears as a big buyer. It happens that the aggressors in all this are those companies whose connections are world-wide and who know the potentialities of South America from their own contact there. Apparently the most astute of our oil executives are not concerned over the prospects of over production riding the industry to its ruin. Either the future is safe or some people are making some mighty bad guesses, and backing them with cash.

Tulsa Society Learns Geology and History of Seminole Area

G. C. Potter and Eugene Weirich of Tidal-Osage Company present data at regular meeting of geological society

By HASTINGS FAULKNER
Staff Representative

Tulsa.—Both the geology and the history of the Seminole area were brought before the Tulsa Geological Society at its regular meeting the night of November 18. G. C. Potter and Eugene Weirich, geologists for the Tidal-Osage Oil Company, presented data on these two subjects.

Their talks were followed by discussions, participated in by the society membership. The geology of this area of Oklahoma was developed as follows:

In the Seminole area, a noticeable feature is the general thickness of the post-Wilcox Simpson. In the Seminole field itself the formation thickens from 20 feet to 35 feet in a distance of two miles. Proceding southward from Seminole to the Maud area the formation has increased to a thickness of approximately 130 feet, so that 12 feet to the mile has been expected of this formation southward. The Simpson has suffered more erosion to the north, until finally, after submersion it was overlaped by the Viola sea. The Viola lime, the Sylvan shale and the lower Hunton lime are in conformable contact. The lower Hunton was exposed to the erosion of the air, as is shown by its erotic differences in thickness of this formation. A striking feature of the Hunton is its persistent thickness from the east until the 9-8 area is reached, where the formation rapidly becomes thicker, and in some areas it is eratic in thickness. It has been interpreted that the lower Hunton has been uplifted above sea level, but not over 300 feet.

Are Highest

The upper Hunton is present to the east, south, north (as in the Searight pool), and possibly to the west, but is absent in the general vicinity of 8-6 and 9-6 area. The absence of the upper Hunton in this area and in some places the absence of the lower Hunton shows that this area was the highest part of the axis that has been exposed to the weather and the resultant erosion. The uplifting of the upper Hunton caused the establishment of the Arbuckle axis. Seminole district is really higher than the Arbuckles, because the part of the Hunton that is eroded at Seminole is present in the Arbuckles. Transgression of the Woodford sea seems never to have reached the Seminole district. This area was finally overlaped by the lower portion of the Caney shale, a zone of 100 to 150 feet of thick bituminous shale. This black Caney shale overlying the Hunton is thought to be the mother of the production in this formation. The fact that the shale overlying the Hunton is bituminous means the presence of oil in the Hunton, if the reservoir conditions are favorable.

The blue Caney muds and subsequent Pitkin lime with its associated sandy phase that is the Cromwell sand, possibly continued without interruption except for a gradual and continuous sinking eastward, resulting in thicker sedimentation in this direction. This condition continued until the close of the Atoka time. At the close of the Atoka time there was a comparatively sudden uplift as the Atoka is overlapped by the Hartshrone, McAlester and Savannah formations. In this north portion the deposition during this time to the east was unaffected by this uplift. Probably over the crest of the Arbuckle axis in the present vicinity of Seminole and southward this overlapping condition was also present, but due to subsequent erosion of the entire section here it can only be postulated.

Like Sand Bar

It was at the close of the Savannah time that the most noticeable uplift of the Arbuckle axis occurred. Through the length of the Arbuckle axis the beds were eroded and in the vicinity of Seminole the erosion cut down through the Cromwell sand. Proceeding southward, the pre-Cromwell beds were rising structurally so that peneplanation affected successively lower and lower beds intil the Caney shales were eroded in the present position of the Arbuckles. To the east, west and on the north flank of the ridge, the Cromwell sand was inaffected by the erosion. The Cromwell sand in the Cromwell field resembles in a way a sand bar in its erratic thickness. The strata at the end of this erosional period had a regional east dip. Successively lower beds were more steeply inclined.

The Boggy sea deposited beds which are found overlapping the entire arch, hiding from view the pre-Boggy structural features. The Boggy sea is not considered to have covered all the main Arbuckle area. This region remained above the sea until near the close of the Wewoka times, and deposition of the upper Boggy, Lenora, Stuart, Thurman, Calvin, Wetumka and lower Wewoka continued without interruption. The parallelism of these formations as shown by the section indicates this fact.

Near the close of the Wewoka times, eastward dipping, pre-Boggy beds were tilted into a horizontal position. Post Boggy beds were thrown into a northwest dip by the first uplift of the Ouachitas, affecting the Seminole area. Following this movement with intervening deposition, there is evidence of other uplifting, both by the Arbuckles and the Ouachitas, but which did not change the general picture of the altitude of the rocks in the Seminole district.

History of Development

Several companies lost the chance of discovering the Seminole pool, due to the fact that they did not drill deep enough. It was in 1913 that the Prairie Oil and Gas Company drilled to a depth of 2530 feet and encountered a show of oil, but the well was abandoned. In the spring of 1916 Noah Adams and G. C. Potter worked the surface structure of the area and leases were taken by the Guffey-Gillespy Oil Company, now the Tidal Osage Oil Company. Then in 1922 the Tidal Osage drilled a well in section 22 to 3865 feet. This well stopped somewhere in the lower Caney shales and no show of oil was reported. It was in 1924 that the Turman Oil Company drilled a gas well in section 34-9-6, which was reported good for about 5,000,000 cubic feet of gas. This gas came from a sand at 3035 feet, which is sand in the Boggy shale. Soon after this well was completed H. H. Taylor drilled in the norhtwest of the southwest of section 35 to a depth of 3980 feet, which, according to G. C. Potter, stopped a little short of the Hunton lime. It was at this stage of the game that things looked bad for this area, but looked better when the Superior Oil Company drilled in its No. 1 Noble in the northwest corner of section 15. This well was good for 50 barrels and at the present is producing 20 barrels.

In March of this year the Indian Territory Illuminating Oil Company completed its No. 1 Dyer for 1100 barrels in the Hunton lime. It was this

(Continued on page 45)

PERSONAL MENTION—MEN YOU KNOW

J. E. Schroeder, South American representative for Hughes Tool Company, recently returned to his home in Houston from Venezuela, for a few months visit. Mr. Schroeder came by way of Panama Canal, and up the West Coast to Los Angeles, where he spent 10 days looking over the Southern California fields. He plans to make a trip to Tulsa for the A. P. I. convention and spend some time in the Mid-Continent fields. He reports that conditions in Venezuela are good, and that the fields are showing steady developments.

A. J. Haskill, of the Midway Gas Company in Northern California, was killed and A. J. Calkins was injured when a break in a gas pipe line which was being laid for the company caused an explosion. They were working side by side when the break in the pipe occurred and the force of the explosion blew them from the ground, Haskill sustaining internal injuries from which he died and Calkins sustaining painful although not serious injuries. Mr. Haskill was 33 years of age.

Bob Miller of the Robert J. Miller Company, Houston, returned last week from a deer hunt in the Eagle Pass vicinity. Bob admits that the first buck he saw gave him the Buck Ague but claims that he settled his nerves on number two and as evidence he brought back a five-point buck.

Sam Hale, agent for Volz Equipment Company, 2719 Houston Avenue, has just returned from a three weeks trip through the Mid-Continent fields and the Pacific Coast. Sam reports an exceptionally good business on his steam separator and automatic lubricator.

J. C. Miller, formerly chief accountant of the Associated Oil Company, Los Angeles, has been elected comptroller for the California-Eastern Oil Company.

John R. Suman, vice-president and general manager of Rio Bravo Oil Company, Houston headquarters, was among the alumni of the University of California at Berkeley to see his alma mater go down before Stanford University grid team 41 to 6. Friends of Suman declare this was a long trip to see a football funeral. He was accompanied on the western trip by his wife, and they expect to return to Houston about December 1.

Al Christensen, G. D. Dougherty and George F. Lane, of the engineering department of the Union Oil Company, Los Angeles, have returned from a tour of Northern California.

Houston.—Mills Bennett Production Company's Kirby B-2 on the east side of Barbers Hill dome is pumping 300 barrels of 23.4 gravity crude, after being completed early last week at 4116 feet. The company, which holds a 121-acre lease around the B-2 well, is rigging up its B-3, 150 feet north of the pumper.

WALTER P. GEORGE
George and Jones Drilling Co., Shreveport

Terry A. Cromwell, field manager for Bashara Oil Company at Sour Lake, died Saturday, November 20, at a hospital in Beaumont from a fracture of the skull. Mr. Cromwell was injured the previous day at Sour Lake field when struck on the head by a piece of heavy timber which fell from the derrick of a Bashara well. He is survived by his wife and three sons, Eugene, Terry and Paul Cromwell; one sister, Mrs. Eckard of Oklahoma; and four brothers, Lee of Luling; Allen of Sour Lake, Charles of California, and Alex Cromwell of Tampa, Florida. Funeral services were held in Sour Lake last Sunday afternoon

Hubert Allen, president of the Alamo Oil Tool Company, Compton, California, is at Palo Alto, supervising tests being made at Stanford University on steels and various alloys to be used in manufacture of the company's products.

Phil B. Dolman, independent geologist of Tulsa, has recently removed his office and residence to San Angelo, Texas. The new West Texas office is located at 18 North Oaks Street, San Angelo.

Rycade Gasser Stronger When Deepened

Houston.—Rycade Oil Corporation's Chittim No. 1 well, which opened a new gas territory November 13, flowing more than 5,000,000 feet of wet gas, 16 miles northeast of Eagle Pass, Maverick County, has been deepened six feet after being brought under control and is reported showing an increase in gas pressure. The total depth was corrected to 5518 feet. The well was spraying several barrels of gasoline shortly after completion.

The new producing area opened by this well is approximately 75 miles from former production, that of Webb County on the southeast. Rycade holds lease on more than a quarter million acres around the gas well.

Houston Geologists Plan Monthly Meetings

Houston, Texas.—The Houston Geological Society is planning a series of meetings for the coming year for the purpose of bringing the members closer together and at the same time exchanging ideas more freely on individual research. At each of these meetings, which will probably be held monthly, some member of the society will present a paper on a coastal salt dome.

A preliminary business meeting was held November 19, with more than 20 members present, after which Dave Carlton, geologist of the Humble Oil and Refining Company, read a paper on West Columbia field.

Dr. Donald C. Barton, chief of the Geophysical Research Corporation, Houston, is the new president of the Houston Geological Society, with Miss Elizabeth Styles, paleontologist for the Gulf Production Company, vice-president.

Geologists Discuss Possibilities of Foreign Fields

Mid-year meeting of A. A. P. G. at New York was symposium of prospective sources outside of U. S.

By C. P. HARRIS, Ph. D.
Special Staff Representative

THE papers read at the mid-year meeting of the American Association of Geologists at New York, November 15, 16 and 17, constituted a symposium on the world's prospective sources of petroleum outside of the United States. The reports were based upon original work in the locality designated and consisted in most cases of exhaustive topographical and stratigraphical surveys of the regions examined. In general, it may be concluded that Russia, Persia, South America, Canada and Mexico are either now producing oil in large quantity, or in the case of Canada may be expected to do so. Siam, China, New Zealand, Spain and Australia do not offer promising fields for oil production; Palestine shows some indications of producing quantities of oil in the future.

An important paper on the problem of continental drift was presented and indicated an increasing tendency to accept one of the various theories or combination of these as moving in the proper direction.

South American Fields

M. O'Shaughnessy discussed the effect of South American oil production on the situation in the United States. He predicted a vast and continued increase of oil in this country and contrasted it with the violently fluctuating demand. Oil-burning locomotives, increased use of automobiles, increased use of oil for navigation and the probable development of aerial travel all tend to increase this consumption. Methods of improving the recovery of oil in this country such as use of the air hoist, sinking shafts and cross-cutting into oil bearing sands, utilization of oil shale deposits, semi-synthetic petroleum from coal and the use of oil substitutes are all not yet passed the experimental stage. The proximity of the South American fields is important. Those in Colombia and Venezuela are nearer New York than Tampico or Galveston, and, of course, much nearer than the California fields. American companies are actually moving considerable volumes of oil from these regions. In the author's words, "It is possible for the American oil industry to use South American production to conserve our domestic supply by compelling rational drilling, and to stabilize the price of crude which means more certain profits to producers and refiners, and cheaper petroleum products to the consumers. There are vast areas still available, which are just as promising as were the now producing sections before the pioneer companies started development work on them 12 years ago."

E. P. de Bellard, Medical Director of the Venezuelan Sun, Ltd., discussed the health problems in the oil fields of that country and stated that the tropical regions of Venezuela are not the unhealthy places imagined, but that the average temperature of the Maracaibo district is 95 degrees F., the average minimum 68, and the average mean, 82.5. He said "Americans and Europeans, men, women and children, stand the climate of this region remarkably well, and while it is not invigorating like that of the temperate zone, it is certainly not injurious. Under its influence there is merely a diminution of the superabundance of energy that we observe here, but this does not mean any real impairment of the vital forces." Malaria is responsible for more disability than almost all the other diseases put together. Local preventative measures are largely effective against this disease. The natives suffer from intestinal parasites and water borne diseases, but white foreigners, rarely.

Poisonous snakes are dangerous in the jungle regions, and all engineers and geologists are warned to carry snake-bite outfits with them. Tigers are plentiful, but, according to Dr. de Bellard, apparently not dangerous. The diseases carried by insects are man's greatest peril. Methods of combatting these noxious pests were listed. "If you lead a clean life and observe a few simple rules of prophylactic medicine, you will find the tropic wholesome."

Oil Geology of Columbia

J. T. Duce read a paper by A. H. Garner, in the latter's absence, on the oil geology of Colombia. The coastal area has striking evidences of petroleum. Seepages of oil occur over a wide area and are very marked. The production, as yet, is very slight, although some wells have been dug to a depth of 4000 feet. In the discussion of geologic formations, the author mentioned that the sources of the oil now produced are the Upper and Lower Miocene strata. Three anticlines are now producing oil.

A short paper by Wallace Lee was read by W. B. Heroy, on the oil possibilities of Siam. Siam is divided into three provinces, the Menam Basin, the Korat Plateu and Siamese Malaya. The stratigraphy of these sections was discussed. The Korat plateu, occupying the center of the arc of folding of the Indo China fold, is the only region which offers any considerable prospect of oil production. There are tar seeps in the northern area and the government has drilled 300 feet to investigate. The tar escapes from a fault or a concealed outcrop. They are inaccessible, however, and are not promising. The author gave little promise of oil production in Siam.

Oil Fields of Alberta, Canada

G. S. Hume discussed the oil fields in Alberta, Canada. These are situated in the regions about Jasper, the Peace River Canon and Athabaska. The syncline of Alberta is in the Peace River Valley. Oil producing Colorado shale is abundant in the Blairmore and Crow's Nest areas. The Blairmore formation is below pre Dakota; above the shale is a stratum of sandstone, after that Montana beds and over that the coal bearing series.

In the Turner Valley wells begin in Colorado shale. This oil field is about 25 miles northeast of Calgary. The fault in this valley should prove most favorable. Many wells are already flowing. One shallow well yields 500 barrels of naphtha of 79 degrees Baume per day. There are coal seams on either side of Turner Valley which consist, probably, of the same coal.

On the plains in southern Alberta, the New Black Diamond fields yield much gas, but, so far, little oil. One hundred and sixty miles southeast of Edmonton is the Wainwright field, where oils at two different horizons are being produced and which have gravities of 12 and 19 degrees Beaume respectively. In the Wainwright-Fabyan-Irma area and further east in the Rimstone Blackfoot field there are gas wells and some oil.

Possibilities of Peru

Arthur Iddings read a paper on the oil possibilities of Peru. The oil district in this country is located in a desert where it rains only after long intervals of years. There is a wide distribution of igneous and cretaceous rocks, limestone, sandstone, etc., the ages of which have been determined by fossil collections. Above the Cretaceous is a layer of 23,000 feet of Tertiary formation, mostly Eocene rocks. The upper Eocene has much fossil formation. Certain sandstone strata are important horizons for oil production. Above this layer is the Oligocene consisting of four different formations of about 6000 to 7000 feet in thickness. There is a small amount of oil in the Oligocene stratum. Above it is the Miocene, about 2100 feet thick with shales at the second level. The oil fields secure their supply from this range. Above the Miocene are Pliocene and Pleistocene

strata. Most of the oil comes from the Eocene strata. Faults have little effect here on distribution of oil, most of which is obtained in high areas. The oil production in Peru in 1926 will be about 10,000,000 barrels, as against about 3,000,000 in 1920.

C. B. Hopkins discussed briefly the geology of the Santa Elena Peninsula of Peru. This region is situated north of the Peruvian fields. The geology is complicated by the existence of a great many faults. The area is about 20 by 30 miles. The climate is a desert. Rainfall is rare at the coast. The geology consists mainly of Tertiary and Cretaceous rocks, with the former more important. Shales are the main source of oil. Oil seepages on the surface have been known since the discovery of the country. The pits for such oil recovery number over 1000. Wells are now being dug in two areas. Great production in the country is improbable, because of the many faults. Some wells have been dug to 6000 feet into the Miocene strata. The Anglo-Ecuadorean Oil Company produced 900 barrels of oil last year, 600 of which were exported.

Persia and Mesopotamia

E. W. Shaw spoke about the oil fields of Persia and Mesopotamia. Persia is the fourth largest oil producing country in the world, due to the Irak region. Mesopotamian oil is probably 5000 to 6000 years old, as bricks laid in asphalt have been found in Ur. Southeast Persia has the greatest field. Irak is supposed to be a British mandate, but the natives are confused about their status, go about their affairs unconcernedly and are just beginning to realize that a foreign government has something to do with them.

In the author's brief description of the geology and startigraphy of the country he stated that the Oligocene stratum is missing and the Eocene is predominant.

The Turkish Petroleum Company controls the Irak field. This company is composed of American, British, Dutch and French oil interests. "It it the first instance of an international combination looking to the joint development of another nation." This exploitation of Persia is not even realized by the Persian natives, who hardly understand what is being done to their country. The author stated that his paper would not be published and that he had great diffculty in being permitted to appear before the American geologists. Under the terms of the concession, the national interests mentioned have the right, for three years more to locate wells to the exclusion of all others. After that time properly qualified companies will be permitted to investigate the territory. The royalty on production to the Persian government is four shillings per ton. The area covers 90,000 square miles.

Palestine and Sinaitic Peninsula

F. Julius Fohs reported on the geology and oil and gas possibilities of Palestine and the Sinaitic Peninsula. He said that the presence of asphalt and oil in the vicinity of the Dead Sea has long been known. Promising structural domes occur in Palestine west of the Jordan and Dead Sea. Of a total of 12,700 square miles in Palestine proper, more than 300 square miles offer structural conditions warranting testing for oil and gas. This is a high percentage of possible oil-bearing area considering the small size of the state, about that of Vermont. The formations range from Eocene to Precambrian. Cretaceous limestones and marls form the great bulk of the beds to be penetrated and next below is the Nubian sandstone and several hundred feet of Carboniferous sandstones, limestone and shales. There are eight possible oil horizons, half of which have good chance to produce.

China No Factor

F. G. Clapp read a paper by himself and M. L. Fuller on the oil possibilities of northeastern China. There are oil seepages in the Western Chansi province and in the north Chansi basin there are a few hundred feet of carboniferous beds. The Shensi basin would not pay and China is not likely to be a factor in the world's oil production.

Mr. Clapp also discussed the oil fields of New Zealand, which he described as a pleasant country, 98 per cent white and English.

New Zealand

The two principal districts in New Zealand in which oil possibilities may be said to exist are the Taranaki District of Western New Zealand and the East Coast District, both situated on the North Island. The possibilities in Taranaki are evinced by certain seepages of oil on the water at New Plymouth and by many gas seepages in various parts of the province. Wells drilled at New Plymouth have taken out (a) igneous contacts and (b) a mild type of folds. In the East Coast district the conditions are quite different; the structures vary from strong anticlines of the Rocky Mountain type to great folds of the Rumanian type throughout a longitudinal distance of several hundred miles. Some of these are "closed" domes in which the strata are gently folded over the crest, with steeper dips on the flanks, while many of the structures are of the "penetrated" type like the salt domes exposed at the surface in southern Louisiana and in Rumania, but with the central core consisting of shale instead of salt.

The faulting is very extensive and suitable folding exists, which leads to the expectation that oil will have been trapped below the surface in commercial quantity.

Numerous seepages exist both of oil and of "wet gas." Some blow-outs of gas have occurred in the past. Suitable "source rocks" are known, porous containers exist and there is an abundance of adequate cover. The metamorphism is not too great in the Cretaceous and Tertiary strata. Some degree of success may be expected in drilling for oil in New Zealand.

Yucatan Peninsula

J. J. Galloway discussed the geology of the Yucatan Peninsula in Mexico. Work was done on the Heilprin and Sapper regions. The topography of the northern coastal plain, the Sierritas and the valley of Tabi were outlined. The streams, caves cenotes, lakes, marshes and aguadas were described. The stratigraphy, from Eocene to Pleistocene, was discussed in detail. While there are no seepages, there are wells at Progreso and Merida.

Development in Spain

F. Dixon read a paper on "Oil Development in Spain." Andalusia in the south of Spain does not offer much promise as a future oil country. Along the northern provinces there are a considerable number of surface shows of oil and asphalt. Tar sands and oil shows are found from the upper part of the upper Cretaceous to the Triassic. Various localities that are possible sources for oil were listed and described, although the oil development of the country is obviously not extensive and does not promise very great possibilities.

Australia

In discussing the oil possibilities of Australia, F. G. Clapp gave a summary but rather critical, discussion of the oil prospects in all parts of Australia, eliminating those areas in which no chance exists and stressing the areas in which there may be a possibility of commercial oil occurrence. For instance, it is shown that Tasmania has practically no chance of commercial oil development. Very little chance is believed to exist in Victoria, South Australia. Western Australia or Northern Territory. Some chances may exist in New South Wales and Queensland, but these states are not believed to have been adequately investigated by geologists. In fact, practically no geologic work has been done there by men experienced in the oil fields. It is recommended that further investigations be made of the Sydney basin, Great Artesian basin and certain other areas in northeastern Australia.

Search for Oil in New Guinea

Presenting a paper on the "Search for Oil in New Guinea", Arthur Wade described graphically the climatic, political, geographical and geologic conditions in the Island of New Guinea and the difficulties of the island—British, Mandated and Dutch New Guineas—are shown to be intensely tropical, wet, thickly forested and infested with natives, who are often unfriendly, as well as with innumerable insects and other objectionable types of animal life. The surface of the country is so rough as to be traversed with the greatest difficulty, and in consequence only a small part of the island has been explored.

The island lies on the First Australian Arc of Suess and other geologists. This arc is an imaginary line, stretching from the East Indies east and southeast to New Zealand, and having the same general tectonic and geologic conditions that prevail in the other groups of islands. Tectonically it has been subjected to tremendous earth movements in great mountain areas, between which Tertiary deposits have been laid down in geosynclines. These also have been folded and faulted on a large scale, so that structures of many types exist.

Some seepages are known in New Guinea. Oil was first discovered in 1911, although the existence of mud volcanoes

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Probable Effect of South America On Producing Business

Increased production will have stabilizing effect and compel rational drilling in the United States

*By MICHAEL O'SHAUGHNESSY**

HAVING no exact knowledge of geology I have chosen a subject that has only a collateral connection with that science.

Preparatory to discussing the probable effect of South American petroleum production on the oil producing business in the United States, let us recognize several basic facts which will help us to appreciate, on broad lines, the relation of one to the other.

1. Petroleum, a widely disseminated liquid fuel in nature, is comparatively the cheapest source of light, heat and power.

2. An adequate supply of this material for the future is absolutely necessary to the maintenance to the industrial life of the world on the present plane; to the progress of civilization, and to its extension to now hidden and remote parts of the earth.

3. Petroleum deposits, no matter in what country they may be found, are a gift of the Almighty to the whole human race, and are consequently not to be exploited solely for the benefit or profit of any one country or section, as against the rest of the world.

4. Wilful waste of the precious gift is a crime against progress, against society, against civilization itself.

Production Increase

In 1916 the daily average production of petroleum in the world, was 1,249,000 barrels, of which the United States produced 822,000. The world's daily average production so far this year, is 2,959,000 barrels, of which the United States is contributing an average of 2,096,000 barrels every day. Any man who might have predicted 10 years ago, any such increase—well, over two and one-half times—would have been considered crazy. Is there any one so bold as to say now that the production of the next 10 years will not have to be increased proportionately, or to over 7,500,000 barrels a day? The prospect is staggering, but it demands serious consideration.

The economies and advantages of the oil-electric locomotive, indicated by the performance of these machines now being tested by several railroads under a wide range of operating conditions, suggests the probability of the oil industry's being called upon, in the not distant future, to supply oil to supplant 150,000,000 tons of coal now used each year in railroad operation.

The extent of the automobile road building programs in all countries, even in the remotest parts of the world, would indicate that the present rate of production of motor vehicles, would not only be maintained, but increased during the next 10 years.

Oil will eventually drive coal from the high seas. Navigation of the air during this period will become so essential a part of our industrial life, as greatly to increase the consumption of gasoline.

Other uses for petroleum products not now dreamed of, are bound at develop, requiring supplies of crude.

One thing is certain. Consumption will each year steadily increase, while production, by the very nature of the business, is apt to fluctuate violently.

In these circumstances, how can any sane man view with apprehension the development of oil reserves where they may be found.

Investment Based on Oil

Do not overlook the fact that American investors, large and small, have over ten billions of dollars invested in the oil industry (outside of oil fields), and in the automobile and collateral industries, the stability and safety of which depend on an adequate supply of crude oil in the future. They can hardly be reassured by the vague statement "that we always have found new fields in the United States to supply demand, and we will continue to do so." Ten billions of dollars is a tidy sum to stake on any such hope.

But we are further assured by more rational oil men that the recovery from known sands will be increased beyond the 25 per cent of the total theoretical content recoverable by present methods; that by sinking shafts and cross-cutting into these sands, we can recover the oil that has ceased to flow; and that oil shale deposits contain a measurable content of petroleum sufficient to meet any demand. The chemists promise us petroleum distilled from coal, synthetic products, and substitutes to take the place of the round billion barrels of oil the world is consuming every year.

Now, not one of these panaceas has progressed beyond the point of reasonable hope. All but the first, contemplate the scrapping of all or a substantial part of the investment in the oil industry as now constituted. Even if these solutions are practical, the investment of further billions would be necessary to avail ourselves of these sources of supply, and many years will be required to realize such hopes.

But why seek relief and safety in such heroic measures, when there are vast areas of semi-proven and probable oil territory in the world awaiting development, promising a surer supply without disrupting the business and without sacrificing tremendous sums invested in present equipment?

I would like to digress here for a moment to state that I have never seen an estimate of the probable comparative total recovery of oil from a given sand, under two conditions: The first, if the gas pressure is lowered gradually by careful drilling, through a number of years. Second, or if it is lowered rapidly to zero by overdrilling. Some data on this subject would be illuminating.

South America Logical Source

The logical areas in which the American oil industry should seek insurance for the future, is in the South American fields, on account of their accessibility to our markets. Cartagena, Columbia, and Maracaibo, Venezuela, are several mile nearer to New York than Tampico or Galveston. The distance from Talara, Peru, to New York is just a little over one-half that from San Pedro. It is axiomatic in industry that raw materials should be manufactured as near their source as possible. It is a distinct waste of time, money and oil, to ship crude 6,000 miles from California to New York, when there is a supply available at less than one-third the distance. This waste is accentuated when the products of California crude are shipped from New York refineries back to the Far East, the legitimate market for Pacific Coast refiners.

The availability of South American crude is not a matter of speculative discussion. It is a fact. The Standard (N. J.), the Gulf and Pan American are moving around 80,000 barrels of oil ranging in gravity from 20 to 42 degrees Be., every day from the oil fields of Venezuela, Columbia and Peru, to refineries in North America, at a transportation cost lower than crude can be shipped from any field in the United States to the same points. The production of these companies is increasing every month, and they have developed very large reserves for the future. The field work of these pioneer companies have solved operating problems and so standardized transportation facilities that any company can enter these fields with no greater capital risk and as good a chance of getting production, as in wildcatting operations in the United States. The Standard (California) has discovered a light oil field in Venezuela within a year of the starting of drilling operations. The Union Oil Company (California) and the Atlantic Refining Company are undertaking extensive programs in these fields.

South American Production

The six oil producing companies in

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South America will produce this year approximately 61,500,000 barrels, as follows:

	Barrels.
Venezuela	35,000,000
Columbia	5,400,000
Peru	10,000,000
Argentina	6,000,000
Trinidad	4,800,000
Ecuador	300,000

barrels of oil as follows:

It is estimated that these same countries next year will produce around 86,000,000 barrels of oil as follows:

Venezuela	48,000,000
Columbia	15,000,000
Peru	11,000,000
Argentina	6,000,000
Trinidad	5,000,000
Ecuador	400,000

South American production so far from being a menace to producing business in the United States, it will prove a stabilizing factor.

The American oil industry seems to have resigned itself to reckless drilling as a permanent condition in the business; as problem that defies solution.

A notable instance of the waste involved in reckless drilling is the spending by a number of companies of ten million dollars for steel tankage to store for several years the production of an undesirable grade of crude oil in the Panhandle district, at a time when the supply of crude exceeds the demands for petroleum products.

The wholly unwarranted cost of carrying this surplus oil must be borne either by the companies, meaning a lessening of their profits; or by the public, in higher cost of products.

Stabilizing Influence

A gradual increase each year in production from the South American fields, and putting in sight, so to speak, of large reserves in strong hands, will do more to compel rational drilling in the United States, than any other factor. Lease owners will face the alternative of throwing their oil on the market at a price below the cost of production, or of bringing it to the surface over a long period of years, at a profit.

The one thing most necessary to stabilize the oil industry of the United States, in the interest of producers, refiners, and the public, is a price for crude regulated by the natural relation between demand and supply regionally considered.

South American oil should be manufactured on the eastern seaboard of the United States as it becomes increasingly available. The Mid-Continent field should supply the Middle West. The Rocky Mountain fields should be drawn upon for the requirements of that section. California should supply the Pacific Coast and the Far East markets.

Production from South America will increase gradually, but in sufficient volume to bring about in an orderly manner this balance in the industry. This may sound revolutionary, but it is feasible, very desirable and inevitable.

To sum up, it is possible for the American oil industry to use South American production, to conserve our domestic supply by compelling rational drilling, and to stablize the price of crude, which means more certain profits to producers and refiners, and cheaper petroleum products to consumers.

No matter what attitude the American oil industry as a whole, takes toward South American production, it is bound to bring about far-reaching re-adjustments in the oil industry of the world. We will be very fortunate if this industrial revolution is guided by co-operative action among the leaders of the indusrty. The oil business is so interstate and international in character, that the co-operation of the national government is also necessary to bring about a stability so fraught with good for future generations.

In conclusion, I wish to correct an impression that seems to have gained considerable currency, that all of the desirable acreage in the South American fields has been taken up. This is not a fact. There are vast areas still available, which are just as promising as were the now producing sections before the pioneer companies started development work on them 12 years ago.

Deep Sand Gives New Slant on Nash Dome Possibilities

Rycade well makes between 900 and 1000 barrels from 26 feet of sand at 4231 feet

By WALLACE DAVIS

Houston.—Nash dome is now offering its best indications of entering the substantial producing field class since giving up its first production January 3 of this year. Rycade Oil Corporation's Wisdom No. 9 was completed November 20, flowing an initial yield of between 900 and 1000 barrels of 20.4 Baume gravity crude from a 26-foot sand topped at 4231 feet, which brings the daily run of the field to approximately 1300 barrels.

Rycade's Nash No. 7 well last week entered a rich oil sand at 5651 feet, and was drilled to 5668 feet. Screen has been set, and the well was washing Tuesday afternoon of this week. In the event this well is a producer Nash dome will have the deepest producing level of any field in Texas.

Rycade Oil Corporation, the sole operator at Nash dome, holding approximately 11,000 acres surrounding the producing area, has five rigs running in the field, and increased activity is expected as a result of the new discoveries.

The rig from Wisdom No. 9 will be moved shortly to a location for Wisdom No. 11, 300 feet south and 100 feet east of the new well. Wisdom No. 2, completed last summer for 208 barrels at 4395 feet, will be deepened after dropping considerably in production, and casing is now being cut out. The Wisdom No. 10 is drilling at 4304 feet in a hard sand, and Flessner No. 5 was 1594 feet in gumbo early this week.

Production from Nash dome is comparatively deeper than the average salt dome in the Coastal country. All the crude recovered from the field is coming from a depth of around 4000 feet, and varying to deeper levels. Gravity of Nash dome oils ranges around 20.5 degrees, Grade "A" crude. An interesting factor about the field's production is two distinct colors of crude on different sides of the dome. Production from the Wisdom lease is a dark green color, while that of the Nash and Flessner leases is of a reddish brown shade, although all of the crude is of practically the same gravity.

Commercial pay was first obtained from Nash dome January 3, when Rycade brought in its Nash 5 well for around 600 barrels from 4113-27 feet after 13 wildcat tests around the dome had failed and were abandoned. This well is still pumping 63 barrels daily after declining from its initial to an unprofitable well and being deepened. Since the discovery well six other producers have been added to the field, Rycade following a logical drilling program without competition.

The dome was discovered by Rycade's Wisdom No. 1 test July 11, 1924, when it drilled into salt at 624 feet. The company had blocked its large acreage reserve from surface indications and then confirmed the belief that a dome was present by use of the torsion balance. The Nash Nos. 1 and 2 were drilled after the torsion balance tests, but failed to find the salt.

The outcome of the Nash No. 7 well is destined to have a bearing of considerable importance on the future development of the field. If a worthwhile commercial well, deeper drilling will no doubt be the program followed in future operations there. In the event of no pay in the present sand or possible deeper sands in the No. 7, production at the lower depths will more than likely not be sought in other wells drilled around the dome. On the other hand, great importance is attached to the discovery of this sand, regardless of whether or not it produces. It is the deepest oil sand known thus far to have been encountered around a salt dome, and throws an interesting light on the possibilities of other domes in the Coastal country. It materially strengthens the theory prevailing for several years of oil at greater depths than have been drilled around the dome.

Production from Nash dome is be-

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Palestine and Sinaitic Peninsula Probable Oil Sources

Area of more than 300 square miles offer structural conditions warranting testing

*By F. JULIUS FOHS**

THE presence of asphalt and oil, showing in the vicinity of the Dead Sea and near Hasbeya west of Mount Hermon, has long been known and these, together with the asphalt rock occurrences, have led many to believe commercial oil deposits might be found in Palestine. The so-called asphalt rock or bituminous limestone has no relationship to the occurrence of oil. The asphalt and oil seepages, where present along fault lines, signify nothing as regards commercial oil where they appear, except as they are suggestive that, in localities where traps occur which have not been disturbed by faulting, oil may be present in commercial quantity. While all of Palestine is faulted into large fault blocks, within such blocks there are thirty-seven structural domes which might act as traps for oil and gas; but where igneous intrusions occur with such structures it is less likely they will produce. Promising domes occur in Palestine west of the Jordan and Dead Sea, with the possible exception of the basalt-covered areas. From the Jordan and Dead Sea eastward to the Hedjaz Railway, because of the basalt intrusions, and exposure of lower beds by uplift, there is very little promise, though some folds are probable in this area. Of a total of 12,700 square miles in Palestine proper, more than 300 square miles offer structural conditions warranting testing for oil and gas. This offers an unusually high percentage of possible oil-bearing area, considering the small size of the State—about that of Vermont.

The Sinaitic Peninsula also offers possibilities.

The formations range from Eocene to Precambrian. Cretaceous limestones and marls form the great bulk of the beds to be penetrated and next below is the Nubian sandstone and several hundred feet of Carboniferous sandstones, limestones and shales. There are eight possible oil horizons, half of which have a good chance to produce.

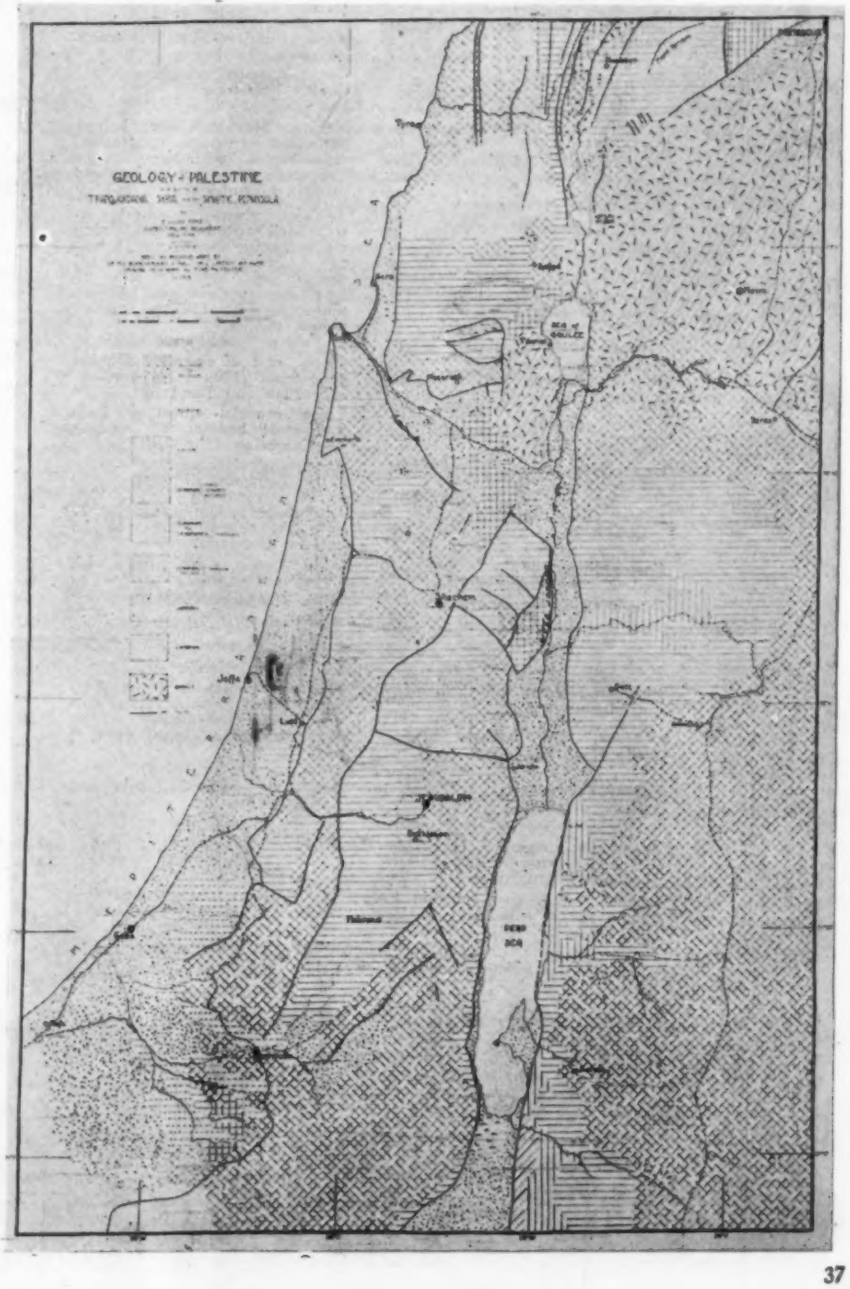
With ample reservoir beds, with ample source material, and with good structural traps, we see every reason for the development of an oil supply in Palestine. We are anxious to see this development undertaken because it would speed the upbuilding of Palestine as nothing else can. Now that the hydro-electric power of the Jordan, known as the Rutenberg project, has been financed, we feel that the next efforts should be turned to the development of the oil and gas possibilities of Palestine.

The accompanying table gives the general stratigraphic section, (a summary of possible oil-gas horizons is given later), while the map shows their areal distribution.

Structure

The structure of Palestine is extremely complicated, though it can be grouped around certain larger structural features, of which the most important, perhaps, are what may be called the Jerusalem Geanticline, a large earth arch where the strata are uplifted, and the Ghor fault block where, on the contrary, a block of the strata is depressed and forms a typical trough-valley. This is part of one of the greatest trough-valleys known, extending from Mt. Hermon south to Nyassaland, or more than three thousand miles. A typical cross-section in Palestine is shown herewith.

On either side of the geanticline, synclinal trough-like fault blocks appear,



*Paper read before mid-year meeting of the American Association of Petroleum Geologists at New York, November 15-16-17, 1926.

while the coastal block, capped with younger formations, is depressed. Immediately east of the Ghor fault block, the formations generally are uplifted; a westnorthwest axis passing through Bethlehem would be along the line of greatest uplift while the geanticline and other formations drop southward and northward from this cross axis; to the northward the geanticline, eastward of Mount Tabor, is greatly depressed and basalt covers its extension in this area. To the northwest of Saifed a mild expansion of the fault appears. Occupying and paralleling the Valley of the Estraelon is a depressed fault block extending from Haifa to the Jordan in a southeast direction. This area is occupied with numerous basalt intrusions.

The Ghor is a narrow depressed fault-block extending from the Gulf of Akaba, along Wadi El Araba, the Dead Sea, the Jordan Valley, Lake Tiberias, Lake Merom and thence northward, splitting into a number of fault blocks north of Lake Merom but maintaining its main course west of Mt. Hermon along Jobel and Dohr and Nahr el Litani. Northward of Lake Merom the structure becomes very much more ocmplicated and consists of a series of faults and alternate uplifted and depressed blocks.

This block is from five to fifteen kilometers wide. The surface elevations south of Lake Tiberias range from 450 feet to 1292 feet below sea level.

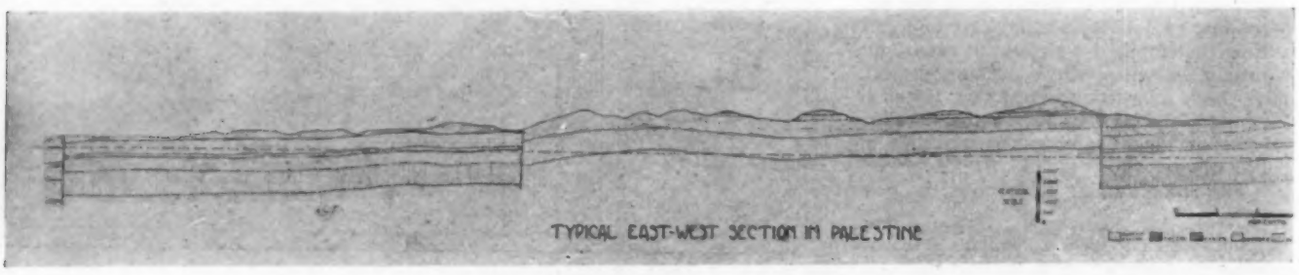
The general strike of the several fault blocks of Palestine parallels the sea coast, which has a general direction of North 21½ degrees east, with a series of cross faults varying more or less from North 48 degrees West. The area may be divided, for further description, into these several fault blocks, considering first those south and later those north of the Esdraelon block.

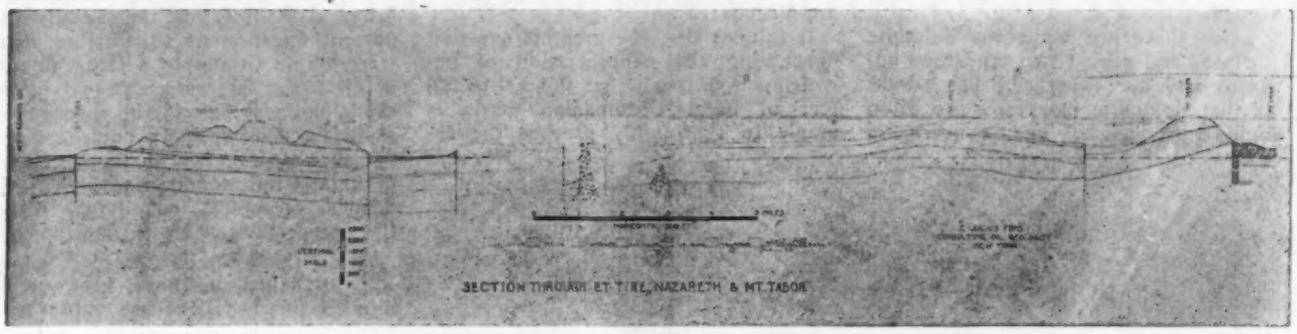
Describing first the Jerusalem geanticline, we have here a large uplifted fault block, the apex of which is southwest of Jerusalem, just north of Deir esch Sheikh south of Saris. It constitutes what are known as the Juedean Hills, with an altitude of from 1500 to 2900 feet. The surface beds are, for the most part, Cenomanian limestone. This area is practically devoid of soils with the exception of minor terracings and wady bottoms. It is notable that the Arabs use the hilltops for their villages, partly because of better climatic conditions, the nights always being cool and a breeze present through most of the hottest summer days.

Structure, as previously indicated, is of prime importance to the occurrence of the principal promising resources. Thus petroleum and natural gas are to be sought on the structural domes, and in a territory like this, having a major amount of rigid (limestone) beds with marked faulting, the badly faulted localities are to be avoided; also, since the beds are apt to have ample salt water, the synclines are to be avoided for these products. The

GENERALIZED STRATIGRAPHIC SECTION OF PALESTINE
(After Blackenhorn, Hull & Hume)

				Feet
Recent	Alluvium			20
Quarternary	Diluvium		Upper Middle Lower	0-200
Miocene	Exposed in Sinai and to small extent on Sinaitic plain.			
	Calcareous Sandstone of Phillistia.		Porous, bedded, uniform. Resembles dolomite, occurs Phillistian plain only	0-50
Eocene	Upper		Yellow to white Nummillitic limestone cherty, marble-like, part dolomitic, with free nummillities, partly nummillitic sandstone.	500
(Basalt eruptives in this period)	Lower		Alveolina and Orbitoida Limestone. (in Sinai)	1320
			2. Vari-colored gypseous marls with thin gyplime layers, veins, etc., est.	200
		Danian	1. Asphaltic, coprolitic phosphatic limestone or green marble. East of Jordan, total Danian 528.	225
	Senonian, (Neocretaceous) (800 feet characterized by dark flint bands.)		2. Bituminous and chalky limestone, bituminous marl and flints.	750
		Campanian 1150 ft. in Sinai.	1. Yellow, white chalky limestone (100 feet Sinai Peninsula including Danian)	
		Santonian	Upper Ammonite horizon Chalky limestone (in Sinai 330 ft.)	0-82
Upper Cretaceous	Turonian (330 in Sinai, 700 ft. in S. W. Judea.)	Basalt at Mt. Carmel Basaltic Limestone Bed.	Nerinee Marble (Mizzi helwi) laminated limestone, concretionary limestone with large melon-like chalcadony concretions and druses. (Jerusalem 140 ft.)	90-700
(Basalt eruptives in this period.)			3. Thick green-gray marls interbedded with limes containing Echinoderms fossil type localities Ain Homer and Wadi Mojib.	250
Upper Cretaceous (Mesacretaceous)	Cenomanian (Sinai 660 feet.)		2. White, yellow and brown limestone with Orbitoida small ammonites, etc.	1100
	Albian? Absent		1. Yellow fossiliferous marls.	300
Lower Cretaceous	Nubian sandstone (Neocenomanian, Petra, or Monumental.)		Upper half of so-called Nubian sandstone. 1000 ft exposed E. of Jordan and Dead Sea.	600-1500
			Lime gravels, quartzite beds and marl beds (often resting on Cambrian dolomite.)	
Unconformity	Transition beds.			
Jurassic Absent except at Mt. Hermon	Upper Glendarian Limestone		Absent at Hermon. (in Lebanon).	
	Lower Glendarian Limestone		Limestone and splintered chalk with Rhynchonella moravica and cidaris glendaria.	
	Clayey limestone		With Pectin Capricornus with Collyrites bicordata.	
	Yellow gray chalky marl			
	Blue gray clayey lime slates		With Harpoceras Socina	
Unconformity			Sandstone Shale beds Sandstone (425-495 in Sinai)	225 150 100
	Between Nubian and Carboniferous sandstone		Dark gray limestone weathers brown with crinoid stems, corals, brachipods, etc. (Iron and Manganese oves at base in Sinai)	20-130
Upper Carboniferous	Wady Nasb limstone			
Lower Carboniferous	Desert sandstone (Lower Nubian)		Sandstone with Sigillaria and Lepidodendra	150-430
Unconformity				
	Dolomitic Limestone (probably Cambrian)			150-180
Cambrian	Red and green-gray marls			42
Unconformity	Massive red sandstone			720
Pre-Cambrian (Algonkian)	Semi-stratified, semi-volcanic beds; bright colored arkose, partly conglomeratic with large boulders, granite, etc., porphyry and fe/-site dikes.			
Unconformity				
Archaen	Older eruptives: Porphyry and porphrites, diorites, diabase red, white and Hornblends Granites; crystaline schists.			





principle asphaltic limestone occurrences are known only in the major synclinal areas. Some asphalt breccias appear along the faults.

The numerous small springs of Palestine are directly related to the structural domes, the tilted beds near the crest of the domes, usually near the tops of hills on ridges, acting as an intake source for the water, while lower along the sides of the hills, the same beds outcrop and from them the water issues as springs. It is possible, with the aid of the structural maps, to determine the approximate depth at which a given spring horizon could be tapped with a well, or whether such a well would be warranted.

Oil and Gas Possibilities

The table shows at a glance the more important possible oil and gas horizons, and a study of it, in conjunction with the stratigraphic table, will prove helpful.

Dome Types

We mapped 37 localities that have greater or less possibilities for oil and gas, embracing the following types:

(a) Domes of considerable area, with excellent closure and ample cover. (Shown in Locality No. 1).

(b) Small domes, with considerable depth cover over important horizons and more promising for oil than for gas. (Shown in Localities Nos. 2 and 4.)

(c) Probable dome, with Eocene beds at surface, and with possibilities in Danien beds.

(d) Large flat structures, promising for gas. (Shown in Locality No. 3).

(e) Large open-spread structures, with possible horizons, very shallow; hence chances best for small wells low structurally with low gravity oil.

(f) Areas in vicinity of basalt overflows; and

(g) Half domes against faults.

The first four types should be tested first. It is to be hoped that the Government of Palestine will arrange for gradual development of the territory over a period of years. It would be a great economic waste to permit unrestricted development of all oil and gas-bearing areas at one time and, in view of the sad experience of America, Mexico, and other countries, it is hoped the Government of Palestine will, from the outset, adopt a wise policy of conservation.

Twenty-three domes of more or less promise, covering more than 1000 square miles, were mapped by the writer in Western Palestine, with the probable position of four additional suggested, while several others were mapped which may be valueless because of faulting or igneous intrusion; this out of a total area of almost 12,700 square miles. About 300 square miles are considered promising for oil and gas, of which 100 square miles (64,000 acres) are especially promising—a very high percentage for a small country. The surface land is, for the most part, valueless at present for agricultural purposes except in occasional wady bottoms or small limited terraces and a good part is actual desert or semi-desert

The largest of the domes is 32 miles long and 3½ miles wide, while the smallest covers only one-fourth of a square mile.

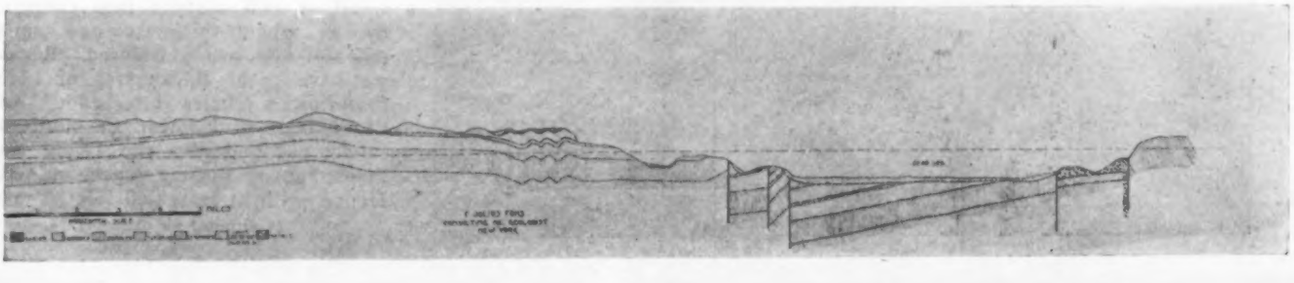
The character of the structural trap is, for the most part, very good except that the larger structures are less promising.

Reservoir Beds and Source Materials

Absence of thick shale bed covers and of good reservoir sandstone beds lessen materially the number of chances for petroleum concentration, nevertheless a number of good reservoirs remain, notably, (1) the dolomitic limestone horizons, porous partly through brecciation, concurrent with alteration from calcite to dolomite form, which involves shrinkage, and partly due to the shape of the dolomite particles, and (2) Nubian sandstones; possibly also (3) the Wady Nasb lime-

POSSIBLE OIL AND GAS HORIZONS

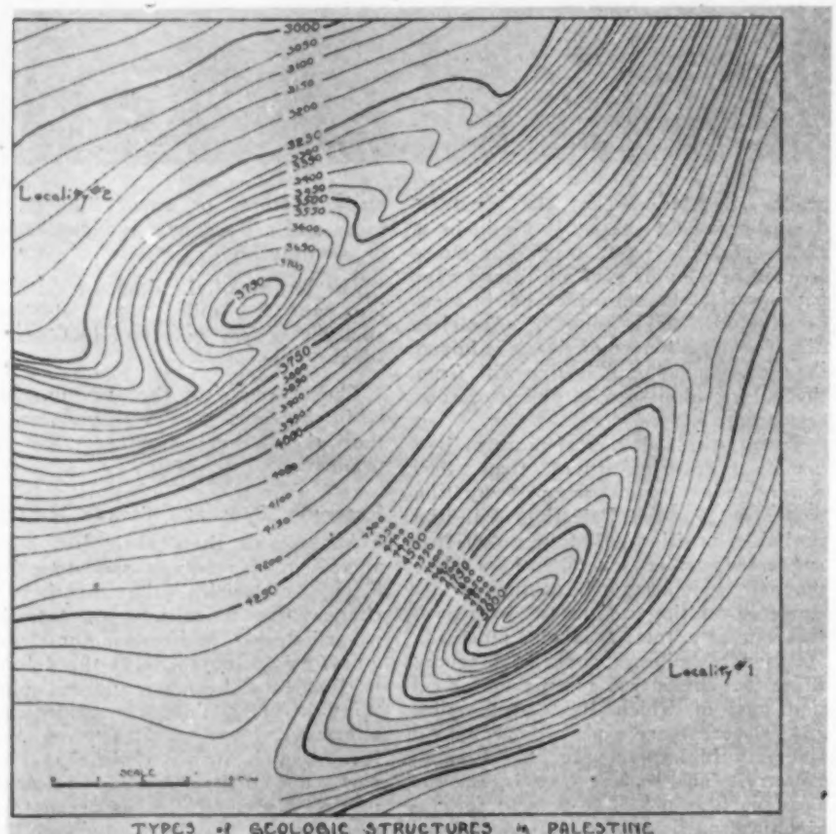
Max Depth	Formation	Possibilities	Min. Depth	Possibilities
300	Upper Danien			
	Lower	Asphaltic Limestone		
650	Campanion	300 ft. below top; possible chance gas; small gas; light oil.		
2000	Cenomanian	200 ft. below top; possible chance gas and light oil.		
3000-3500	Nubian sandstone	Top best chance light oil and gas. 500 ft. below top good chance light oil.	250-750	Heavy Oil
4250-4500	Upper Carboniferous Sandstone	Good chance oil and gas.	1500-1750	Good chance oil and gas.
4750-5000	Wady Nasb Limestone	? If always present possible chance light oil and gas.	2250-2500	? If always present possible chance light oil and gas.
? 5450	Lower Carboniferous Sandstone / Shale	Chance	?	Chance.
	Basal Sandstone	Small chance.	2950	Small chance.
	Cambrian			
	Precambrian	Useless to test.		Useless to test.
	Granite	Useless to test.		Useless to test.



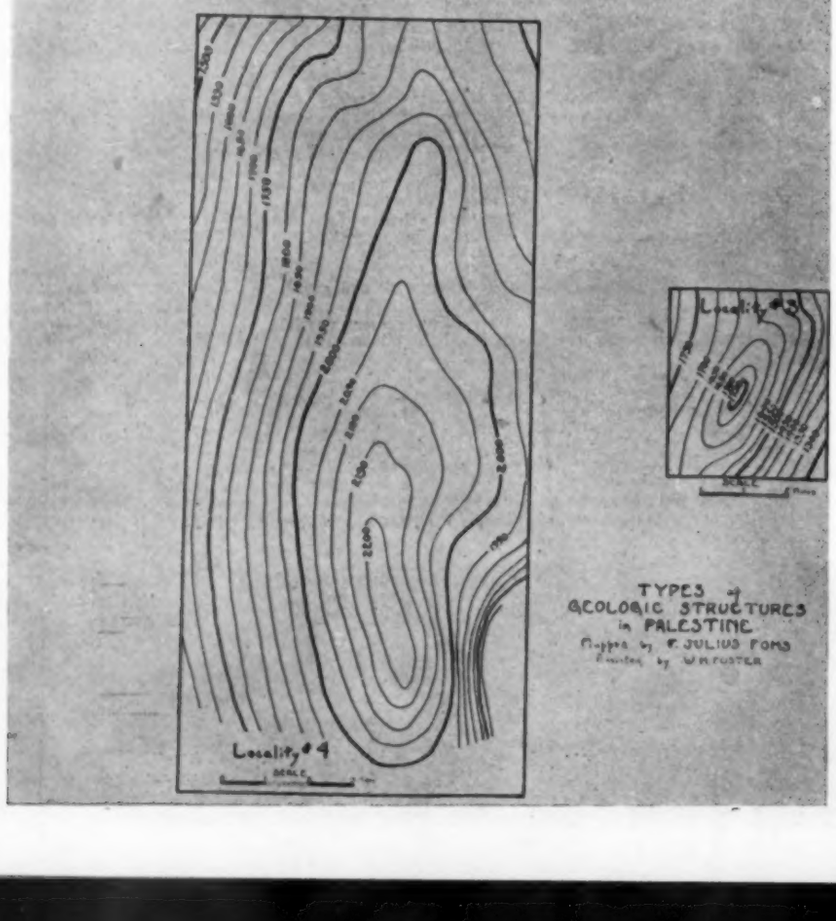
stone, and (4) the Lower Carboniferous sandstones.

Since there are numerous dolomite horizons and a least two sandstone horizons and our experience has taught us that dolomitic reservoirs are often highly productive, our concern is chiefly with the effectiveness of impermeable coverings.

It follows that the greatest question concerning the concentration of petroleum here is whether the 250 to 300 feet of basal Cenomanian marls is ample to thoroughly prevent the escape of the oil, especially in the shallower structures, and an equally important question as to whether these were ample to supply a large amount of oil to be later concentrated in the sandstone just below; the seepages of asphalt and oil spring occurrences previously noted suggest that some oil did occur and this, together with the well-defined structural conditions, makes the prospects well worth development.



TYPES of GEOLOGIC STRUCTURES in PALESTINE
Mapped by F. JULIUS FOMS. Drawn by W.M. FOSTER



Aside from the larger marl covering, just cited, we have, between the lime (chalk) beds, one-to-two-foot marl layers occuring throughout the Cenomanian beds.

In the case where Danien beds are at the surface, we have a considerable additional thickness of marls to seal the limestone series below, though this last is true only in a few instances as, for example, in the Philistian plain and at Gebel Tanka in Sinai. The recent developments in West-Central Texas answer a question I have long puzzled over—the occurrence of considerable amounts of oil where there is a great thickness of rigid beds with little in the way of bituminous or other shales interbedded. Aside from impermeable shale coverings, we have come to have a great respect for the efficiency of cap rocks created by the effective cementing of the uppermost six inches to a foot or more of the reservoir bed itself. Except, therefore, where faulting has caused excessive fracturing and especially where such fracturing has taken place after the accumulation of the oil, we conclude that there is ample impermeable cover to a number of reservoir beds in Palestine.

In connection with his discussion of the oil occurrence of Gebel Tanka, Hume expresses the opinion that the primary source of the oil is the Cenomanian marls, and in this I concur. He found outcrops in at least two localities in West-Central Sinai of oil-bearing marls of at least a meter total thickness, from which he concludes:

"That the oil marls at their exposed faces contain on the average about 1.3 per cent of hydrocarbons * * * Based on this amount we have a content of over 25,000 tons per square kilometer. (247.1 acres). This is quite sufficient to provide sufficient quantities at points where natural conditions may have concentrated it."

In a thickness of 250 to 300 feet of Cenomanian marls, with only occasional thin limestone layers interspersed, we have a goodly body of source material aside from the specifically oil-bearing layers, and, while the percentage of organic matter may be very small, it still mounts into enormous figures when thickness and square miles of area are considered. Besides, we have great thicknesses of highly fossiliferous shales interbedded with the Nubian and lower Corboniferous sandstones and also the Wady Nasb limestone, as further source material. Hence, with at least 400 feet of marls

(Continued on page 44)

Huntington Beach Production Raised By Nine Completions

Field average up to 35,000 barrels; Ventura Avenue output steady at 58,000 barrels without new wells

By GEORGE REID
Staff Representative

Los Angeles, California.—Production in the Ventura Avenue field remains at 58,000 barrels produced from 70 wells. The Shell Company's Gosnell No. 13 which came in last week flowing at the rate of 3400 barrels from a depth of 6305 feet has settled to 3311 barrels. The Associated Oil Company's McGonigle No. 2, which is about a half mile north of nearest production may now be taken out of the wildcat class. While testing for water shut off the well began to flow from 5585 feet. The flow was killed and the company is preparing to make a production test at this depth. The 6¼-inch casing was set at 5270 feet and a 4⅜-inch oil string is being run in. Associated's Lloyd No. 37 is also scheduled for early completion as it is drilling in shale and oil sand at 6100 feet.

Generla Petroleum Corporation will also contribute another producer at Ventura Avenue in the next few days. Its Barnard No. 7 was finished at 6100 feet in the regular oil zone and with heavy gas pressure. The 8¼-inch casing was set at 4157 feet and 5¾-inch oil string landed at 6100 feet.

The Petroleum Securities Company secured an excellent showing of oil and gas in its Orton No. 1 at 5407 feet, but has not reported whether the well will be tested for production at this depth or drilled ahead to the 6000 foot level.

There are 29 drilling operations under way in various stages of development in the Avenue field, with 13 rigs up ready to start work. The Associated Oil Company reports a new Ventura Avenue location in its Dabney No. 1, 1065 feet north and 9360 feet east of Conner No. 11. This company has 10 wells drilling and seven rigs up. General Petroleum is operating seven strings of tools and has three rigs up. Petroleum Securities Company has two wells drilling, and the Shell Company has seven drilling operations under way with three rigs ready. Bolsa Chica Oil Company's Hartman No. 1, a deepened well is flowing 1200 barrels, and its Hartman No. 2 is drilling at 3675 feet. C. J. Magenheimer is drilling his Hartman No. 1 at 3738 feet.

Four wells in the Ventura Avenue area are near the deeper pay sand. Shell Company's Edison No. 10 reports drilling in hard sandy shale at 6355 feet. Shell's Edison No. 11 is also drilling in hard sand at 6265 feet. The General Petroleum Corporation has drilled to 5940 feet in its Barnard No. 1-A, reporting tough shale. The fourth deep well is the Associated Oil Company's Lloyd No. 32 which has been drilled to 6159 feet and is cementing 8¼-inch at 3975 feet.

Huntington Townsite Yield Up

Completion of nine new wells at Huntington Beach townsite contributed sufficient oil to offset the natural decline of the area during the past week and ran up the field's production to 36,500 barrels. The Julien Petroleum Corporation finished the second of its string of wells and contributed its Stafford No. 1, finished at 4238 feet and flowing about 1000 barrels of 23.2 gravity oil through a 38/64-inch bean. Tubing pressure is 225 pounds. Julian has five more operations near the completion stage.

E. J. Miley finished his fourth well in the area. Pacific-Electric No. 6 which was drilled to 4350 feet came in good for 1500 barrels flush production through a 44/64-inch bean. The oil is 17 degrees gravity. Fred Roberts also completed his No. 1 well at 4300 feet flowing 1600 barrels on production test.

Petroleum Securities Company led the field in number of newly completed producers. Its Drew Fee No. 1 flowed 800 barrels of 14.2 gravity oil the first 24 hours. The depth is 4066 feet, with 175 pounds tubing pressure and flowing through a one-half-inch bean. Petroleum Securities Gibson No. 1 was finished at 4126 feet, producing 755 barrels, and its Lambert No. 1 came in from 4350 feet flowing at about the same rate as the other two wells of the trio, through a 5/8-inch bean. The oil is 23.4 gravity.

The Standard Oil Company contributed two wells to the list of completions. Its Huntington Beach No. 7 delivered flush production at the rate of 1000 barrels daily from 4351 feet, through a 20/32-inch bean; gravity 23.0 degrees A. P. I. Standard's Huntington Beach No. 10 came in for 500 barrels from 4316 feet; flowing through the same size bean.

Huntington Beach Townsite's shallow or tar sand was successfully tested this week by the McKeon Drilling Company. The McKeon Company well, Du Bois No. 1, was drilled to 1947 feet where it was decided that a test of the so-called tar sand would be of interest. Du Bois No. 1, at the depth of 1947 feet was drilled through 185 feet of the tar sand, and the production test carried out this week indicated that the shallow stratum may be productive to the extent of 200 barrel wells. This is the first test that has been conducted in this shallow sand, although over 100 drilling operations have passed through the zone during the past three months.

A resume of field operations shows that there are 18 new rigs up, 123 operations under way, with 67 active producers having an average production rate of 544 barrels per well. During the past week 12 new wells were spudded in.

There are 10 drilling operations in the Huntington Beach townsite area that have reached the interesting depth of 4000 feet. Julian Petroleum Corporation's Davis No. 1 is standing cemented at 4033 feet and its Stafford No. 2, and Stien No. 1 report shale at 4335 feet. Petroluem Securities' Machris No. 1 is in oil sand at 4390 feet, and its Montgomery No. 1 is standing cemented at 4338 feet. Standard Oil Company's Huntington Beach No. 8 reports sand at 4300 feet, and its Huntington Beach 9 is in oil sand at 4330 feet. Superior Oil Company is drilling in oil sand in its Fee No. 2 at 4348 feet with the same report for its Gilmore No. 1 at 4347 feet. Superior's Stever No. 1 is standing cemented at 4163 feet. The United Oil Company reports oil sand at 3990 feet in its Vann No. 1.

Signal Hill Stages Surprise

The old Signal Hill district at Long Beach has staged the second surprise of the month. Early in November the Pan American Petroleum Corporation completed the largest well finished in this area for over two years when its Chaney No. 2 in the northwest section of the old field flowed 1400 barrels from a depth of 5389 feet. The Pan American oil is 28 gravity and the flow is holding up nicely. This week the Richfield Oil Company contributed a much larger well in the same old producing area and not many feet distant from the Pan American Chaney No. 2. Richfield's Haas No. 8, a new well in old territory, was completed at 5329 feet, flowing 29.8 gravity oil at the rate of 2750 barrels daily. In addition to the oil flow the well is producing gas at the rate of 1,250,000 cubic feet which carries 2.63 gallons of gasoline per thousand cubic feet.

Geologists Discuss Possibilities of Foreign Fields

(Continued from page 34)

had long been known. A miniature oil boom followed, and some oil has been found in wells in the British portion of the island. It is not certain that any of the showings in wells have been of commercial size, but some of them may have been. A large amount of geologic work must be done before we know anything definite of the prospects, but, based on Dr. Wade's observations, there is a fair chance that fields may be found there in time.

Continental Drift

W. A. J. M. van Watershoot Van der Gracht delivered the address at the only evening session held, on Monday, November 15. His subject was, "The Problem of Continental Drift." A resume of this address was given Wednesday morning. An idea of the view-point presented may be had from the author's review of the Drift Theories and Isostasy. Dr. van der Gracht outlined these as follows:

"The various drift theories have originated from the attempt to give a better explanation of a number of geologic facts, which had never been properly explained by existing theories. Amongst these facts I cite in particular the great amount of compression, which becomes ever more evident when the inner structure of the major folded belts of the earth become better understood. The contraction theories are no longer adequate to explain the amount of crust shortening required. Another problem is the distribution of climate during the past geologic periods and the closely related migration of vegetable and animal life over the earth, during the course of its evolution. Considerations of this nature lead several scientists, in part independently from each other, to the hypothesis that the outer crust of the earth had periodically shifted, and is possibly still drifting over the thinner layer, thereby changing the geographic location of the continents, and in particular placing different portions of the earth's geography over the poles of its axis of rotation. Priority for the drift idea should be given to Dr. F. B. Taylor, who in 1910 was the first, specifically, to advocate drift on a large scale. Professor Alfred Wegener first mentioned his own more widely advertised theory in 1912, in an address in Frankfurt. In 1923, Dr. R. A. Daly published a theory, more or less similar in effect, but explaining the drift as a gravitational sliding of the continents.

"All these theories are primarily based on Suess' assumption that the outer crust of the earth consists of two superimposed layers, of which the outermost, at least for the present, does not cover the entire earth, but is principally concentrated in the continents. This outer continental layer is Suess' *'sial'*, consisting of silicates, predominantly of aluminum, sodium and potassium. Granite and orthogneiss are the type rocks of this material.

"Suess called the underlying substratum the *'sima'*. It consists of a much greater thickness of silicates, predominantly of magnesium and calcium whilst aluminum, postassium and sodium become rarer. Basalt and gabbro, the so-called basic igneous rocks are the type material.

"The density of the sial rocks is considerably less than that of the sima material. Under low pressure, as they exist at or near the surface, the density of the sial rocks varies between 2.5 and 2.7, whilst that of the sima rocks is between 2.9 and 3.0. Of course the density of both substances increase to a small extent under great pressure, such as prevails at a depth of some tens of kilometers.

"The sial and sima rocks do not only differ in density, but in addition, they have different physical properties. They are both rather *'rigid'*, as should be expected of rocks. Their *'strength'*, however, is decidedly different. In order to properly understand the following discussion, we must have a clear understanding of what is meant by these very different properties: *'rigidity'* (versus *'plasticity'*) and *'strength'*. There is a great deal of confusion regarding these properties of matter, which makes that a large portion of the controversy regarding the possibilities of isostasy, and particularly of continental drift, itself is at cross purposes, because the dissenting parties are confused regarding these fundamental definitions.

Rigidity in a solid is: *the instantaneous elastic resistance of the material against distortion.* In a liquid *viscosity* (internal friction) has the same effect if it reaches considerable magnitude.

"Strength is a very different property. It is: *the ability of the material to resist permanent set under long enduring pressure.*

Isostasy

"The immediate consequence of these different properties of the rocks in the outer crust is the phenomenon of *isostasy.* The outer masses of sial are in what we might call hydrostatic equilibrium with the sima. They actually float in the latter, like ice in water. The difference in density makes that the emerged part of a block of sial above the sima surface, must be a little less than one-eighth of the part which is immerged. Speaking in nautical terms, we might say that the 'freeboard' of a floating mass of sial is a little less than one-eighth of its 'draught'. The average continental surface lies 820 meters above sea level, the average depth of the ocean is 3,800 meters, consequently the average freeboard of the continental masses floating in the sima is now 4.62 km. If the burden on such a sial float is increased by deposition of sediments upon it, or possibly by the formation of a thick ice cap, the float must sink deeper. If on the contrary, the burden is lessened by erosion, or an ice cap melts away, the float has to rise. This is what actually happens. The continental masses are all approximately compensated. There exists, however, small, so-called anomalies, which are caused by the considerable lag, observable in the process, due to the great viscosity of the sima, which requires a long time to be displaced by such movements. This makes for instance, that the areas which were once covered by the last Pleistocene land ice, although it disappeared some ten or fifteen thousand years ago, are not yet fully compensated: these regions are still rising slowly.

"My own personal standpoint therefore is, and presently I will go into this somewhat further, is that an ever accumulating amount of evidence piles up in favor of some form of continental drift. It remains very difficult to explain the mechanism of the impulses which *caused* it, and in particular to explain how the very small forces, that so far have been brought forward as an explanation, could cause such a tremendous effect against the considerable resistance of the sima, and particularly of its crust on the ocean floor. I refer here to our previous discussion of the principles of the solid and liquid state, of 'rigidity', 'viscosity', 'plasticity' and 'strength'. It is probable that the main controlling factor is *time.* Although the sima is 10,000 times more viscous than sealing wax or pitch, even tiny forces might suffice to cause it to flow, particularly in deeper layers, provided these forces are applied during a sufficiently long period of time. We have ample time to use in geology, geophysics, and cosmology!

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Gas Lift Method Not Applicable To All Conditions

It is as important to know when it is not practical as to know when such method would be advantageous

By M. W. HAINES
Natural Gas Engineer

THOUGH the application of gas under pressure to oil wells with the intention of increasing the crude oil production has been tried, records show, as far back as 50 years, the art of successfully handling the greater portion of oil wells under artificial flow methods with consistent and practical results has been only of recent attainment. It has been a striking success with only a very few investigators in this new phase of the petroleum industry. The facts surrounding the comparative results of producing oil under gas flow methods have always been vague and uncertain, usually based upon data of unknown origin, and covering such a small scope of experimentation that no reliable conclusions have been available to the oil industry at large, as to the practicability of gas flow procedure and its application to all oil wells.

It is of just as much value and importance to the producer of oil to know when it is not practical to use gas flow methods on his wells as it is for him to know when it would be advantageous. The lack of definite knowledge of this fact alone has been the stumbling block. Many enterprising engineers, who, having met with a certain measure of success in flowing a few oil wells by high pressure gas, fail to grasp the basic fundamentals and rashly launch an extensive conservation program, feeling justified by their earlier apparent successes, to handle any or all oil wells. Failing miserably in this has caused the changed aspect of flowing oil wells by proven mechanics to that of irrational uncertainty, and excluding as a result, the facts that many engineers failed even though capable and experienced to some extent. The result was that the most optimistic oil producer was forced to admit that the installation of gas flow apparatus was decidedly a gamble and a hazardous gamble at that, for it has been known to cost the oil operator everything from a sanded up well to its complete loss, not to mention the numerous wells with their various ailments caused by partially successful experimenters striving to produce oil by gas flow proceedure.

Not Always Successful

Now that one company in particular has been able to put oil well flowing by high pressure gas on a practical basis, and has been able through their years of experience and constructive experimenting to differentiate between oil wells that may be profitably handled by gas flow methods, and those that are not; it is an opportune time to outline the major facts to be considered in flowing wells with gas, that are not based upon hypothetical figures, but figures gained from the individual wells, on concrete results from over 200 oil wells embracing every class and description.

Considering briefly oil well production methods that have met with more or less success heretofore, it is admittedly conceded that no certain pump of certain dimensions, stroke and design, has yet been invented which will give a maximum production from every oil well. Likewise it is not any more reasonable to expect that every oil well will respond to the same degree or any degree of production by gas flow methods, but, like production by any other method, has its individual characteristics to be contended with, and gas flow methods are, and always will be, far from being a cure-all or a phenomenal success when applied to every oil well.

The terms success and failure as referred to in the artificial flowing of wells are in themselves misleading and what one authority may class as a success another may concede to be a failure, so the terms as they are used herein may be so designated.

A well being produced by gas flow methods is a success when the net revenue both present and ultimate derived from the well exceeds the net revenue received on other types of production methods immediately prior to its installation. Numerous times it has happened that a well converted to gas flow methods is a success even though less oil was actually produced than formerly,—or a failure even though the production was materially increased. In the first case the following changes were noted: The gasoline content of the natural gas was nearly doubled and without a loss in the gravity of the crude oil; the sand content was reduced from eight per cent to less than one per cent and the well was off production only 15 hours in 30 days operation, where previously it averaged three days off production out of every month, with the added inconvenience and expense of labor and material.

In the second case, the production of the well was increased a few barrels, the sand content was lowered, but the gas output of the well decreased so rapidly that it was necessary to buy gas in the field to fire the boilers, and it just happened that dry gas in this territory was at a premium and along with the expense of servicing the well the net revenue was less than when on the beam.

Primary Object

The primary object of the introduction of the gas lift system as carried out by responsible pioneers in this branch of the industry was the conservation of the gas in an oil sand so that said oil sand would yield a greater ultimate production. At first this was entirely accomplished by the utilitization of the casinghead gas as made by the well itself. This is still practiced where the condition of a well justifies it, but due to the uncertainty heretofore surrounding gas lift activities, the operators in the industry have not been willing generally, to turn over flowing oil wells to be operated under gas flow methods. Usually the wells given over to gas flow activities and procedure were wells that were totally unprofitable and entirely unsatisfactory on other production methods,—with the feeling probably, that if the worst happened, they couldn't lose much. In consequence, the majority of wells to which compressed gas flowing systems have been applied, are wells which could not be satisfactorily or profitably operated under any other method of production. This attitude

PANHANDLE OPERATIONS

Amarillo, Texas.—Condensed summary of field operations in the Texas Panhandle district at the close of last week is listed below by counties, with comparative totals for the previous week:

	Completions	Active Tests	Shut Downs	Rigs and Derricks	Locations	Totals
Armstrong Co.	..	1	1	..	..	2
Briscoe Co.	..	..	..	..	1	1
Carson Co.	2	27	3	19	4	55
Castro Co.	..	1	..	1	..	2
Childress Co.	..	1	..	1	..	2
Cochran Co.	..	1	..	..	..	1
Collingsworth Co.	..	1	1	..	3	5
Dallam Co.	..	2	1	..	..	3
Deaf Smith Co.	..	..	..	2	..	2
Donley Co.	..	1	..	..	..	1
Gray Co.	3	65	6	15	5	94
Hansford Co.	..	..	2	1	..	3
Hartley Co.	..	1	8	..	..	9
Hemphill Co.	..	..	4	1	1	6
Hutchinson Co.	23	188	41	62	28	342
Lamb Co.	..	..	1	..	..	1
Lipscomb Co.	1	..	1	..	..	2
Moore Co.	..	5	7	1	..	13
Motley Co.	..	..	..	1	..	1
Ochiltree Co.	..	..	4	1	..	5
Oldham Co.	..	..	..	1	..	1
Parmer Co.	..	1	..	..	..	1
Potter Co.	..	2	2	1	..	5
Randall Co.	..	1	..	..	..	1
Roberts Co.	..	3	1	3	..	7
Sherman Co.	..	1	1	..	..	2
Swisher Co.	..	..	..	1	..	1
Wheeler Co.	2	11	2	6	1	22
Totals	31	313	86	117	43	590
Total for previous Week	43	325	87	120	36	611

gives the gas flow system the atmosphere of the cure all, or the last resort—when in reality, its economy of operation, simplicity, and ease of control, etc., should give it first consideration. Where gas flow systems are understood thoroughly, there is no reason why the artificial flow methods should not be applied to the well while still flowing, for the purpose of keeping that flow continuously.

In conclusion, a resume of the apparent facts are,—that gas flow methods are not a "cure-all" for all oil wells,— and that any oil well, when surveyed by competent gas lift engineers can be catalogued as to its adaptability to gas flow methods; this survey usually eliminating the risk of failure, for no reputable engineering organization can afford failure after their survey and when they pronounce the well in question as adaptable to profitable operation by artificial methods.

Palestine and Sinaitic Peninsula Probable Oil Sources

(Continued from page 40)

and shales, besides the fossiliferous limestones, we conclude there is no lack of source material.

The nearest developed oil fields are those of Egypt at Jebel Jensa and near the southwest coast of Persia. Both of these fields are in Miocene beds and therefore bear no analogy to the Palestine possibilities, which are in Cretaceous beds. The nearest analogy we have is in the Algerian occurrences and these have not been developed to any degree, largely owing to the prohibitive French laws.

With ample reservoir beds, with ample oil source materials and with good structural traps, we see every reason for the development of an oil supply in Palestine.

Suggestions as to Development

Owing to lack of test wells for comparison in Palestine, and incident to lack of knowledge as to water saturation conditions in likely sands, it may take from three to four test wells on each of the larger structures to determine the position of the oil, if any is present. It is probable, however, that oil in the shallow sands will be found on much lower structural contours than that in the deep sands. Should the more northerly structures produce, owing to proximity to igneous intrusions, gas or heavy (fuel) oil only is apt to occur, while elsewhere (except where sands are very shallow, i. e., have slight depth of cover) are apt to yield light, higher-grade oil as well as gas.

The surface beds vary from basal Cenomanian to Eocene and the maximum depth of tests recommended varies from 1900 to 5200 feet. Such tests cost, in America, from $20,000 to $90,000 each. In Palestine, the freights and other increased costs would probably increase this materially, (possibly 50 to 100 per cent) as, for a time, it may be necessary to transport both material and skilled labor from the United States for these purposes, though other steel-producing countries might supply more cheaply casing and other supplies.

Working hours should be so arranged, especially during the hot season, that the hours from 10:30 A. M. to 3:30 P. M., when the heat is greatest, need not be employed; and, as is usual in American oil fields, day and night shifts should be provided.

Asphalt Rock

The following types of occurrence of asphalt and asphalt rock have been found in Palestine:

1. Masses or blocks rising on the surface of the Dead Sea.
2. Asphalt filling fissures and as dolomite breccia cement.
3. Asphalt impregnating sandstone and from springs.
4. Asphaltic limestone in beds in the basal Danien.

These deposits are of little or no interest from the standpoint of being directly related to commercial oil occurrences though they do partly indicate a probability of there having been some oil accumulations in the beds with which, or near which, they are associated, and thus indirectly give promise that in localities where suitable traps occur undisturbed testing for oil is warranted; it is not, however, warranted in the vicinity of the asphalt occurrences, with one exception. They are, however, of interest from the standpoint that some of the occurrences have themselves a value; that is to say, the second and fourth types may locally be valuable, the fourth being the most important.

Start Three Ten-Inch Pipe Lines to Serve Panhandle

(Continued from page 26)

erected by Gulf at each station along the trunk line.

Gulf has an eight-inch line leading from Ranger to Fort Worth, and from Fort Worth to Saltillo Junction, located in Northeast Texas, the main line is made up of 84 miles of eight-inch and 42 miles of double six-inch pipe. The Panhandle-West Texas oil will feed into Gulf's Oklahoma-Port Arthur trunk line system at Saltillo Junction, but a shorter cut may be made in the near future by building a trunk line from Ranger direct to Port Arthur. Gulf has a refinery at Fort Worth, which is at present operating on North Texas and Ranger-Breckenridge crude, while the volume of the latter has declined so that most of it is moved by gravity to Fort Worth.

Several million barrels of steel storage capacity is held by Gulf in the Ranger district, and this storage will be pressed into service during the periods that crude deliveries from the Panhandle exceed the capacity of the eight-inch carrier leading out of Ranger to Fort Worth.

Gulf does not contemplate making an extension from its Panhandle trunk line to tie into the Wichita Falls district in North Texas, since the latter district is already served by a six-inch carrier extending from Burkburnett to Fort Worth.

The first unit of Gulf Pipe Line Company's line in the Texas Panhandle district was completed and placed in operation June 28, 1926. This unit is made up of 35 miles of eight-inch pipe, and originates an the Dial-Perkins ranch on the north side of the Canadian River, traversing Gulf's producing leases on the south side of the river and through the Burnett ranch field in upper Carson County to the company's principal tank farm in section 8, T. T. Ry survey, block 2, near the town of Panhandle.

The survey for a direct pipe line connection to Ranger was made at the time the first pipe line unit was built by Gulf, but the purchase of right-of-way and construction of the complete line was held up to await field developments. Since the completion of this 35 mile line, Gulf has accumulated approximately 1,500,000 barrels of Hutchinson and Carson County crude in the field and at the Panhandle tank farm, which will have a total of 44 80's available for storage when the present tank building program is completed. Gulf also has four completed 80's in the northwest quarter of section 90, G. C. & S. F. survey, block "Z", Hutchinson County, and a 55,000 barrel tank on its discovery lease in Carson County.

Gulf has shipped approximately 300,000 barrels of crude from its 40 car capacity rack at Panhandle to the Gulf Refining Company at Port Arthur, owing to current crude runs having crowded the tank builders for storage in the district, but future tank car shipments will be held in check as long as possible.

Gulf is more fortunately situated on crude supply than any of the major companies now building a trunk line to the Panhandle district, since current runs by Gulf in the district, including crude handled for other producers, amounts to about 30,000 barrels daily. Of this amount Gulf has 2440 barrels in Gray; 600 barrels in Carson; 9950 barrels in Hutchinson; and a half interest in 6955 barrels in Hutchinson County. The joint interest production is shared by Walter Cline and the Panhandle Refining Company, Wichita Falls operators with a quarter interest each. Gulf has a big reserve of proven and semi-proven acreage awaiting development in the Texas Panhandle district, and can provide a supply of crude for its 10-inch line over a long period of time by drilling up its present holdings.

Watching Utah Well

Salt Lake City, Utah.—Fearing the recent strike on the Cane Creek structure by the Midwest Refining Company may not be as important as at first thought, operators in the region are awaiting the outcome of the deep test. A year ago the first sensational strike was made in the same hole. The company never was able to cope with the water situation and carried the test deeper. Nothing of importance was found until two weeks ago, when another oil-bearing sand was tapped. The well actually flowed from a depth of 4975 feet.

Deep Sand Gives New Slant on Nash Dome Possibilities

(Continued from page 37)

ing taken by the Humble Pipe Line Company to its West Columbia main by a six-inch line built following completion of the Nash No. 5 well. Production from Rycade's seven producers in the field at the opening of this week was as follows:

	Bbls.
Wisdom 9	905
Wisdom 8	168
Nash 5	63
Nash 6	35
Flessner 2	50
Flessner 3	102
Flessner 4	25
Total for 7 wells	1,348

Tulsa Society Learns Geology and History of Seminole Area

(Continued from page 31)

well that started activity in this area which resulted in the drilling campaign which has brought about the present great production.

The Amerada Petroleum Corporation was first to deepen a well to the Wilcox sand. It was located in the northwest corner of the east half of southeast quarter of section 24. This well reached the Wilcox sand at 4265 feet and made 50 barrels of oil and a **lot of water.. This well gave the clue that the Wilcox was going to produce oil on the structure.. It also gave the approximate water level of the field,** which is approximately minus 3300 feet on the Wilcox sand.

The Independent-Garland No. 1 Fixico was the first gusher in the Wilcox sand of this area. It came in for 6000-9000 barrels a day. This well with the three others on the 40 acres have produced more than 1,000,000 barrels of oil up to this time. There are now 36 Wilcox sand wells at Seminole and they are producing over 100,000 barrels a day. The Hunton lime wells in this pool bring the daily production up to near 115,000 barrels a day. It has been predicted that the peak will be near 200,000 barrels a day. There are over a hundred drilling wells in the field, which when completed will probably bring the field up to its maximum production. This puts Seminole in a class with other major pools of this section of the country.

Two Structures

There have been enough wells drilled now to show that there are two separate structures in the Seminole field, one around section 24 and the other around section 26, namely the north structure and the south structure. The south structure is the largest and at present has the best producers. G. C. Potter has drawn a structure contour map of this area which shows that the contours wiggle and make sharp turns. The cause of the wiggly contours was thought by some to be due to inaccurate measurement of the well depth, which would in some cases cause a mistake of around 40 feet. This idea did not receive much support, yet it may be right. There have been three dry holes in the Wilcox of this area, one of which is between the two structures. This well is in the northwest corner of section 25 and belongs to the Prarie Oil and Gas Company. This well is very low and it is thought that it is in the center of a syncline. This syncline lies between the two anticlines. The south structure has most of its wells in section 26, but the highest part of the structure is in section 35 and the lowest in 34, at which the Amerada Petroleum Corporation found the Wilcox dry. The Hunton lime is thicker on the north than on the south structure.

It is believed by some that the Cromwell sand and other sands are more likely to produce than the Hunton lime or the Wilcox sand, in the Earlsboro area. There is now one Wilcox producer in this area and two in the Searight area.

Houston.—Gulf Production Company's Bordages No. 2 wildcat, Fannett dome, in Jefferson County, made salt water at 4993 feet ,and was preparing to abandon Wednesday morning. A sand was penetrated at 5119 feet two weeks ago and a stuck drill stem caused a fishing job following discovery of the show. The hole was sidetarcked at 4500 feet and drilled to 4993 feet into a second show of oil. The hole was swabbed, and a good show reported, but later turned to salt water.

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Say you saw it in The OIL WEEKLY

LEADING COMPANIES IN TEXAS

	Third Quarter 1926	Second Quarter 1926	First Quarter 1926	Fourth Quarter 1925	Third Quarter 1925
Gulf Production Company	5,332,629	3,383,666	2,993,412	3,307,880	3,656,318
Humble Oil and Refining Company	3,319,736	3,160,740	3,119,970	3,513,294	3,830,444
Yount Lee Oil Company	3,145,052	.....	.....	.....	.....
Magnolia Petroleum Company	2,894,221	2,187,202	1,395,077	1,476,523	1,617,239
Phillips Petroleum Company	2,394,473	951,093	.....	.....	.....
The Texas Company	2,387,272	2,351,025	2,555,554	2,430,441	2,760,166
Big Lake Oil Company	1,695,546	1,817,978	1,680,971	1,723,221	1,166,302
Marland Oil Company	1,400,011	.....	.....	.....	.....
Pure Oil Company	1,131,960	1,211,348	1,350,356	1,593,636	1,967,893
Rio Bravo Oil Company	1,127,090	.....	.....	.....	.....

Total, third quarter, 1926	45,419,269
Total, second quarter, 1926	31,070,972
Total, first quarter, 1926	29,925,790
Total, fourth quarter, 1925	31,443,244
Total, third quarter, 1925	34,164,140

Texas Third Quarter Production Tops All Previous Records

WITH a gain of 14,378,297 barrels over the previous quarter, Texas production for the third quarter of this year broke all former records. The total yield of all companies operating in the state amounted to 45,419,269 barrels, as shown by reports furnished the state auditing department. Eestimated value of this oil as given for taxation purposes was $87,690,328.

This remarkable gain can be accounted for by heavy flush yields at Spindletop, and by the steady increases from the Panhandle and West Texas fields.

Most of the companies showing more than a million barrels production for the quarter, reported increases over the second quarter, but the ones with substantial gains were those operating either in the West Texas or Panhandle district, or with holdings in the deep sand area at Spindletop.

Gulf Production, for instance, which heads the list this quarter as it did last, has a prolific lease at Spindletop and is well represented in the other fields mentioned. The Gulf's output increased 1,948,763 barrels.

Humble Oil and Refining Company gained only 158,996 barrels for the quarter, an increase of 1766 barrels daily. This gain, however, was sufficient to keep Humble in second place on the list of companies with more than a million barrels.

Yount Lee Oil Company, a company that did not report a million barrels during the second quarter, showed the greatest gain of any other company in Texas, jumping to third place in the list with a total of 3,145,052 barrels. Yount Lee is the major operator at Spindletop and discovered the deep sand which has yielded so much oil during the past four months. This company controls most of the choice acreage in the deep sand area.

Magnolia Petroleum Company gained enough production to put it fourth in the list, due largely to taking over properties formerly owned by the United North and South Oil Company, at Luling.

Phillips Petroleum Company's operations in the western part of the state caused its production to increase from 951,093 barrels during the second quarter, to 2,394,473 barrels for the quarter just ended. This gain gave Phillips fifth place among the companies exceeding the million barrel mark.

COMPANIES REPORTING GROSS RECEIPTS TAX ON CRUDE OIL PRODUCTION FOR THE QUARTER ENDING SEPTEMBER 30th, 1926.

Name and Address—	Barrels	Value
Allday Oil Corporation, Wichita Falls	12,948	34,144
Anna Belle Oil Co., Dallas	1,478	4,121
Arnold & Frazier (June 30th), Putnam	240	613
Amicable Life Insurance Co., Waco	388	500
Arlington Oil & Gas Co., Arlington	157	335
Andrews, W. R. et al, Putnam	2,834	6,588
American Well & Prospecting Co., Corsicana	26,481	33,101
Alamo Oil Co., Brownwood	3,563	5,844
Arnold & Frazier, Putnam	516	1,371
Atlantic Oil Royalty Corp., New York, N. Y.	1,653	1,653
Anchor Oil Co., Dallas,	2,994	7,575
Aztec Petroleum Co., San Antonio	237	296
Ada Belle Oil Co., Batson	18,039	27,690
Ada Belle Oil Co. (June 30th) Batson	19,591	30,366
Associated Petroleum Company, Ft. worth	18,166	37,092
Atlantic Oil Producing Co., Dallas	440,042	861,709
Abercrombie, J. S., Co., Houston	90,648	138,479
Apple-Brandeberry Oil Co. et al, Wichita Falls	14,286	39,012
Arkansas Natural Gas Co., Pittsburgh, Pa.	1,163	2,327
Arkansas Fuel Oil Co., Pittsburgh, Pa.	4,005	9,141
Apex Oil Corporation, Amarillo	24,838	37,770
The Ashe Syndicate, Ft. Worth	1,039	2,478
American Refining Co., Inc., Wichita Falls	76,749	135,155
Alford Oil Co. (March to Oct.) Dallas	518	932
American Well & Prospecting Co., Corsicana	11,625	14,532
Appleman, H., Tulsa, Okla.	38	84
Agate, A. L., Trustee, Eastland	102	164
Alonso Jr. Oil Producers, Laredo	2,053	2,567
Artex Oil Co., Wichita Falls	4,536	11,801
All-American Oil & Gas Co., Oklahoma City	62	149
Andrews Petroleum Corp., New York, N. Y.	7,169	11,623
Amerada Petroleum Corp., Tulsa, Okla.	138,251	284,216
Albany Oil Co., Breckenridge	2,523	5,779
Albany Oil Corp., (6-30-26), Breckenridge	3,556	7,733
Adams, Brown Lickey, Wichita Falls	633	1,619
Atlas Oil Corporation, Humble	3,367	5,151
Associated Oil Co., San Francisco	56,500	78,865
Ascot Co., The, Wichita Falls	15,434	43,591
Ailes, J. W., Wichita Falls	1,018	2,576
Amster, N. L., Ardmore, Okla.	2,506	4,506
Aaronson, C. T. (June 30), Tulsa, Okla.	87	213
Aaronson, C. T., Tulsa, Okla.	263	680
Acorn Oil Co., Beaumont	7,374	11,456
Broderick & Perrin, Fort Worth	180	442
Burnett-Larkin Lease (W. B. Larkin)(Wichita Falls	459	1,180
Bartlett Production Co., Thorndale	8,412	21,282
Barbour Oil Co., Houston	4,812	11,143
Burton McKee Oil Corp. (6-30-26), Strawn	1,667	3,656
Brock & Showers (June 30), Corsicana	3,587	9,071
Black Cat Oil Co., Electra	1,456	3,568
Big 4 Consolidated Oil Co., El Paso	478	1,083
Blue Bonnet Petroleum Corp., San Antonio	1,570	3,039
Baker, J. A. & Mollie B., Breckenridge	6,681	15,833
Bashara & Bashara, Waco	342	513
Brinkley Producing & Refg. Co., Pittsburgh, Pa.	597	1,326
Barkley, T. G., Sour Lake	2,906	4,338
Bynum & Palmer, Rockdale	401	1,027
Biggs Oil & Gas Co., McKinney	1,639	4,405
Bartlett, Wm., & Co., Electra	582	1,567
Basham, C. E., Wichita Falls	226	534
Britton, Gorden & Wickens, Strawn	435	1,104
Bush & Cluck, Waco	418	585
Burton McKee Oil Co., Strawn	615	1,417
Both Oil Co., Olney	489	1,173

Name and Address—	Barrels	Value
Big Indian Oil & Dev. Co., Gainesville	972	1,944
Buckeye Dev. Co., Columbus, Ohio	147	296
Annie Beardon Lease (Lee Wilson), Wichita Falls	9,388	24,254
Burns, L. T., Wichita Falls	149	358
Burns, L. T., Wichita Falls	9,656	22,068
Bridewell & Mayfield, Wichita Falls	8,715	23,179
Braden Co., The, Eastland	3,804	9,621
Burk Venus Oil Co., Dallas	13	30
Borealis Oil Co., Oklahoma City	5,371	13,375
Brown, Geo. I., deceased, Red Bank, N. J.	803	1,464
Boyd, E. W., Cisco	4,815	12,536
Bexata Oil Co., San Antonio	2,288	4,511
Bowman Oil Co., Rockdale	3,285	8,304
Baldwin, F. C., et al, Fort Worth	4,732	12,848
Barnsdall Oil Co., Tulsa, Okla.	69,327	170,156
Bullington, Lee & Pendleton, Wichita Falls	26,948	70,925
Barkley & Conway, Ranger	35,863	100,054
Barkley & Crotty, Ranger	10,322	25,883
Barkley, Crotty, Six & Little, Ranger	2,587	6,120
Babcock, Scheurer & Schlaffke, Electra	162	423
Black, Pearson & Hudson, Corsicana	43,316	54,010
Bynum, W. W., Rockdale	2,357	5,995
Beggs, Geo., Strip, Fort Worth	3,132	8,693
Brownwood Producing & Ref. Co., Brownwood	2,568	6,196
Browick & Showers, Corsicana	2,609	6,897
Blair & Kell, Dallas	14,584	37,550
Brady, J. F., Ardmore, Okla.	422	1,041
Beasley, C. U., Electra	4,702	14,774
Beasley Drilling Co., Electra	4,526	11,828
Brady Bros., Ardmore	2,088	5,353
Biel, Wm. A., Von Ormy	40	84
Bryan Oil Corp., Wichita Falls	1,953	4,701
Blair & Kell, Dallas	1,638	3,383
Bennett, Mills, Production Co., Houston	52,143	86,415
Brown, Mrs. Carrie L., et al., Orange	54,255	83,830
Brown, Dr. E. W., Estate, Orange	5,203	8,099
Badger Oil Co., Amarillo	4,333	6,093
Buttram Petroleum Corp., Oklahoma City	18,018	48,151
Brown & Co., Inc., Cisco	4,396	10,980
Big State Oil Corporation, Dallas	25,092	63,011
San Bernard Oil Co., Beaumont	3,520	5,442
Buckeye Pipe & Supply Co., Breckenridge	774	1,583
Big Lake Oil Co., Pitsburg, Pa.	1,695,546	3,744,530
Burke-Greis Oil Co., Tulsa, Okla.	8,534	21,748
Burke-Greis & Gwinnup, Tulsa, Okla.	8,237	19,726
Bridwell & Heydrick Oil Co., Wichita Falls	121,997	311,476
Bridwell & Heydrick, Trustees, Wichita Falls	5,652	14,749
Bleakley & Kinnison, Wichita Falls	1,296	2,962
Big Bend Oil & Gas Co., Laredo	1,388	1,735
Barkley & Meadows, Wichita Falls	6,738	17,866
Bashara, J. F., Houston	49,192	91,052
Burns, W. R., Wichita Falls	69	163
Barkley & Meadows, Wichita Falls	87,875	214,405
Baker Oil Co., Inc., Houston	3,935	5,608
Bass, Dillard & Bower, Wichita Falls	1,823	4,467
British American Oil Prod. Co., Wichita Falls	17,841	45,965
Brannon & Murray, Cisco	8,170	22,378
Bashara, M. J., Wichita Falls	45,640	72,187
Barnum Oil Corporation, Amarillo	1,850	2,904
Burns & Maxson, Wichita Falls	6,170	16,105
Burns & Maxson, Wichita Falls	8,976	24,083
Beaver Oil Corp., New York, N. Y.	4,298	6,180
Bonner, J. H. S., et al., Wichita Falls	4,305	11,715
Bonchill (The) Co., Wichita Falls	9,650	26,175
Buchanan, S. R., Batson	12,495	19,244
Blue Bonnett Oil Co., Wichita Falls	949	2,401
Bass & Dillard, Wichita Falls	2,156	5,629
Bruce, H. J., Wichita Falls	1,955	4,938
Bay Oil & Gas Co., Mirando City	1,590	1,988
Baird Oil Co., Moran	1,056	2,678
Brady Bros., Minerva	4,203	10,833
Bell Burke Oil Co., Waco	523	1,276
Canyon Oil & Gas Co., Cross Plains	16,010	41,130
Camp Oil & Gas Co., Wichita Falls	8,942	23,035
Chandler, C. G., San Antonio	2,129	2,661
Cranfill Bros. Oil Co., Wichita Falls	1,334	3,292
Clay, J. D., Houston	3,243	4,827
Continental Supply Co., St. Louis, Mo.	650	1,482
Candania River Oil Co., Amarillo	27,231	48,741
C G & C Oil Co., Wichita Falls	640	1,466
Coffey & Graham, Wichita Falls	383	995
Christie Bros., Wichita Falls	11,592	28,597
Curtis, Jas. A., Wichita Falls	11,101	29,702
Caruthers Oil Co., San Antonio	2,553	4,954
Carter, Fine & Carter, Wichita Falls	3,519	7,302
Chapman, P. A., Jr., Eastland	804	1,777
Cornhuskers Oil Co., Lincoln, Neb.	5,428	6,785
Cline Oil Co., Wichita Falls	2,420	6,050
Cline, W. D., et al., Wichita Falls	559	1,399
Charter Oil Co., Brownwood	15,757	32,845
Chestnut & Smith Corporation, Tulsa, Okla.	3,108	7,745
Cromwell, Carl G., Big Lake	31,312	55,897
Carter, Roy I., Wichita Falls	16,554	43,577
Curry, E. M., Cross Cut	8,673	23,881
Crystal Oil Corp. of Texas, Denver, Colo.	1,048	2,465
Cowling & Newell Oil Co., Wichita Falls	590	1,476

Name and Address—	Barrels	Value
Cezeaux & Martin, Humble	11,384	17,076
Corsicana Oil & Refg. Co., Corsicana	8,858	10,888
Cottle Oil Co., San Antonio	1,139	1,504
Carteret Oil Co., Jersey City, N. J.	1,594	3,845
Clem Oil Co., Houston	463	749
Calhoun, J. C., Corsicana	238	476
Calhoun, J. C., Corsicana	761	875
Cole, W. C., Wichita Falls	1,199	3,130
Carlin, W. W., Ranger	368	864
Carlin & Dewhirst, Ranger	577	1,419
Chenault, N. B., Wichita Falls	8,986	23,850
Cox, Edwin B., Ardmore, Okla.	3,329	7,723
Chenault, Palmer & Burch, Wichita Falls	27,731	74,196
Cady Oil Co., Moran	4,905	11,613
Clara Oil Co., Wichita Falls	729	1,879
Conner, Son & Cloughley, Gotebo, Okla.	7,420	19,212
Clear Lake Oil Co., Rockdale	7,669	19,438
Cole Petroleum Co., Laredo	...	...
Collins, J. L., & Co., Corsicana	34,391	47,989
Corsicana Oil & Refining Co., Corsicana	11,207	14,653
Clear Creek Oil Co., Brownwood	1,077	2,402
Coffey, Schlaffke, Electra	78	203
Cosden, J. S., Inc., Fort Worth	82,941	220,376
Cranfill Bros. Oil Co., Dallas	14,941	38,142
Carteret Oil Co., Jersey City, N. J.	1,462	3,699
Clark, Harbin & Baldridge, Wichita Falls	5,490	13,020
Crown Central Pet. Co., Houston	148,457	190,828
Crown Oil & Refining Co., Houston	19,148	29,391
Corlett, W. B., Wichita Falls	579	1,409
Capitol Oil Co., Orange	4,443	6,788
C. W. M. T. Oil Co., Wichita Falls	3,738	9,899
Cockrell McIlroy Oil Co., Amarillo	59,314	105,840
Cosa Oil Co., Cisco	928	2,567
Coble-Whittenburg Oil Co., Amarillo	74,999	93,549
Crawford, Jas. K., Tulsa, Okla.	11,325	32,018
Continental Oil Co. of Texas, Wichita Falls	781,521	1,876,855
Colony Oil Co., Wichita Falls	2,812	6,833
Chicago Oil & Land Co., Rockdale	1,455	3,681
California Co., The, Colorado	228,631	395,531
Cowling & Hoppes, Wichita Falls	70	128
Consolidated Oil Co. of Texas, Wichita Falls	44,742	115,507
Cook & Reeder, Wichita Falls	5,645	14,804
Clark, N. F., Wichita Falls	238	470
Culbertson Co., Wichita Falls	22,070	60,056
Canyon Oil Company, Seminole, Okla.	333,175	481,139
Castleberry, S. A., Vernon	531	1,136
Coyle Concord Oil Co., San Antonio	2,547	6,226
Crowe, M. H., and Elmer Crowe, Wichita Falls	51	117
Caldwell Guadalupe Pick Up Station, Luling	2,264	2,944
Chapman, P. A., Estate, Waxahachie	26,842	62,672
Clara Oil & Production Co., Beaumont	478	731
Cohen & Lebow Trust, Baltimore, Md.	378	887
Campbell Royalty Co., Wichita Falls	1,090	2,905
Cockrell-McIlloy Oil Co., Amarillo	35,000	43,750
Coffield & Hale, Rockdale	827	1,960
Coons & Hotchkiss, Graham	5,418	9,092
Cotton, J. H., & Co., Iowa Park	2,332	5,978
Coppeck & Coleman, Iowa Park	1,883	4,877
Canary, S. C., et al., Tulsa, Okla.	1,423	3,462
Cohen, Aaron, Baltimore, Md.	13,473	35,116
Cranfill & Reynolds, Cisco	161,889	378,557
Caltex Oil Co., Spokane, Wash.	675	1,189
Dixon Creek Oil Co., Amarillo	236,522	295,652
Double Five Oil Co., Amarillo	4,224	6,387
Dudley, G. S., Iowa Park	978	2,565
Dorian, R. P., Wichita Falls	7,869	17,461
Duquesne Oil Co., Eastland	597	1,490
Dominion Oil Co., Tulsa, Okla.	2,372	5,488
Devonian Oil Co., Tulsa, Okla.	34,436	63,442
Dillon-Glasscock Co., San Antonio	587	1,041
Developers Oil Co., Wichita Falls	939	2,347
Deep Sand Syndicate, Corsicana	502	502
Dailey & Dowell Co., Cisco	1,101	2,764
Danciger, A., Wichita Falls	2,658	7,174
Dickey Oil Co., Cisco	1,340	3,079
Domestic Oil Co., Cisco	1,894	4,966
Dalton, Jack, Oil Co., Fort Worth	754	1,802
Dale Oil Corporation, Wichita Falls	39,196	102,057
Dale & Crawford, Electra	1,187	3,163
Dayton Oil Co., Dayton	286	457
Derby Oil Co., The, Wichita Falls	92,085	142,707
Dale Oil & Refining Co., Wichita Falls	11,084	28,338
Douglas Oil Co., Tulsa, Okla.	750	937
Dallas-Bradford Oil Co., Dallas	248	573
Duncan, J. W., Wichita Falls	7,917	20,665
Dixie Oil Co., Inc., Shreveport, La.	186,980	269,852
Davis, Caroline A., Somerset	610	1,152
Den-Wich Oil Co., Abilene	1,553	3,945
Dixon Creek Oil Co., Amarillo	591,025	1,079,896
Dunigan & Dunaway, Amarillo	16,997	25,576
Delmar Oil Co., Bartlesville, Okla.	1,443	2,589
Deutser, B., Trustee, Beaumont	2,780	4,339
Dale Knotts Oil Co., Wichita Falls	260	688
Dennis, I. S., Moran	1,841	4,265
Davis, W. F., Wichita Falls	1,530	3,952
Derby Oil Co., The, Dallas	1,201	2,639

Name and Address—	Barrels	Value
Dixon & Reeder, Wichita Falls	381	598
Darilek Lease Account, Wichita Falls	6,442	15,852
Davis, L. R., Tulsa, Okla.	132	211
Dibble Oil Co., San Antonio	2,779	3,613
Duffield, Howard, Oil Co., Tulsa, Okla.	1,704	3,553
Eastland Oil Co., Fort Worth	26,920	54,133
Electra Callahan Oil Co., Electra	2,040	5,225
Empire Gas & Fuel Co., Bartlesville, Okla.	293,722	578,075
Electra Gulf Oil Co., Electra	3,678	8,371
Electra Production Co., Electra	2,292	6,168
Empire-Pierce-Fordyce Lease, Fort Worth	15,818	41,614
Ellis & Anderson, San Antonio	193	381
East Batson Oil Co., Batson	14,498	22,321
Eddy Oil Co., Beaumont	644	884
Easton, E. S., Wichita Falls	2,500	6,481
Echo Oil Co., Amarillo	53,420	80,408
Earnest Oil Co., Rockdale	2,105	5,318
Evans Oil Co., San Antonio	8,835	11,485
Evangeline Petroleum Co., Wichita Falls	1,505	4,018
El Paso-Burkburnett Oil Co., El Paso	67	165
Eggers, J. E., Trustee, San Antonio	1,185	2,269
Erie Investment, Ltd., of Texas, Toranto, Canada	888	2,106
Electra Gulf Oil Co., Electra	3,260	7,884
Eureka Producing Co., Tulsa, Okla	22,211	55,971
Erickson, David, Wichita Falls	229	572
Earnest, Herman, Ranger	165	293
Fuqua & Ripp, Grandfield, Okla	1,866	4,349
Ferguson, W. H., Wichita Falls	851	4,697
Fuller, E. E., Wichita Falls	474	1,128
Fort Ring Oil & Gas Co., Fort Worth	672	2,023
Foster & Sanford, Fort Worth	1,150	2,082
Fuchs, Fritz, Taylor	244	519
Freeman Hampton Oil Corp., Wichita Falls	11,968	31,582
Farish & Ireland Lease, Houston	4,234	6,224
Fresno Oil Co., Wichita Falls	23,401	59,269
Fohle Oil Co., Minerva	2,625	6,268
Ferguson, Hawkins & Hester, Wichita Falls	1,695	4,515
Feagin, Gillette & Roth, Tulsa, Okla.	6,618	16,306
Fuller, King & Daniel, Wichita Falls	4,832	13,252
Fountain Production Co., Saratoga	5,220	8,061
Fisher & Gilliland, Wichita Falls	9,590	25,331
Franchott, D. W., Company, Tulsa, Okla.	316	316
Fisher-Gillilad-Gates-Nutt, Wichita Falls	4,443	12,046
Flynn, W. B., Beaumont	7,229	11,901
Frontier Oil Co., San Antonio	15,285	35,565
Farlyn Oil Co., Houston	6,619	8,580
F H E Oil Co. et al, Sherman	11,988	20,750
Flemin & Kimbell, Sherman	37,888	53,287
Fensland Oil Co. of Texas, Denver, Colo.	9,846	23,391
Ferguson & Watson, Electra	2,522	6,583
Fly-Blackburn Oil Co., Amarillo	12,061	20,066
Foster-Townsend-Ungren & Frazier, Putnam	7,632	19,887
Five Rivers Oil & Gas Co., Wichita Falls	...	...
Gates-Bacon-Lea, Wichita Falls	23,095	54,776
Godley Oil & Gas Co., Dallas	14,555	35,249
Galena-Signal Oil Co. of Texas, Houston	92,227	159,666
Gardner, J. A (lease account), Wichita Falls	309	538
Gutzler, W. F., Wichita Falls	175	405
Gilbert Co., The, Beaumont	6,398	9,789
Gholke, F. H., Wichita Falls	19	34
Grand Duke Producing Co., Muskogee, Okla.	222	530
Granit Oil & Gas Co., Ridgeway, Colo.	361	965
Gallagher & Lawson, Desdemona	172	394
Gultex Production Co., Waxahachie	4,977	13,389
Guthrie, Cole & Ferguson, Wichita Falls	2,666	6,388
Glenridge Oil Corporation, St. Louis, Mo.	4,627	11,508
Gulf Coast Oil Corporation, Houston	21,010	32,273
Gordon Oil Co, of Texas, Logan, Ohio	79	200
Gholson-Morman-Dorsey, et al, Ranger	3,163	8,649
Graham, H. L., Wichita Falls	1,510	3,590
Goolsbee & Graham, Wichita Falls	180	424
Graham & Lash, Moran	5,883	14,241
Gunn Production Co., Cross Plains	8,014	19,088
Gillespie, R. G., deceased, Cisco	7,697	21,229
Ginsburg & Bohner, Burkburnett	4,940	12,866
Gilliland Oil Co., Tulsa, Okla.	1,357	3,856
Gibson Oil Corporation, Amarillo	64,242	80,748
Groupe No. 1 Oil Corporation, Big Lake	858,861	1,886,325
Gladys Belle Oil Co., Tulsa, Okla.	6,177	12,453
Gholson, Thompson, Barkley & Crotty, Ranger	7,186	18,485
Gray, T. H., Fort Worth	1,288	2,294
Godfrey, F. L., Enid, Okla.	125	317
Galvez Oil Corporation, Tulsa, Okla.	6,197	14,492
Gilliland-Scott et al, Wichita Falls	789	2,079
Gates Oil Co. (Wyoming Corp.), Denver, Colo.	19,753	34,051
Golding & Cochran, Wichita Falls	643	1,543
Galconda Oil Co. No. 1, Wichita Falls	259	631
Gardner Bros. & Collins, Wichita Falls	2,621	6,716
Golden West Oil Co., San Antonio	41,577	55,161
Gilliland Logan Oil Co., Ft. Worth	4,406	7,666
Gilman & Conway Bros., Cross Plains	19,613	55,450
Gulf Production Co., Houston	5,332,629	9,135,222
General Oil Co., Houston	1,327	3,417
Goolsbee & Goolsbee, Wichita Falls	274	700
Glasscock Sump Oil Co., Lytton Springs	399	459
Gutzler & Cottingham, Indianapolis, Ind	50	119
Gates Oil Co., Ardmore, Okla.	5,641	15,345
Grayce Oil Co., Wichita Falls	15,555	40,699
Glasscock Rosa V., San Antonio	613	1,172
Glasscock Leasing Syndicate, San Antonio	2,992	6,130
Grayburg Oil Co., San Antonio	280,512	403,923
Glass Bros., Minerva	1,552	3,323
Goldelline Oil Corporation, Oklahoma City	4,298	6,180
Gwynn-Boyd Drilling Co., Wichita Falls	25,398	46,784
Gallagher & Lawson et al, Desdemonia	181	1,599
Grady D., Electra	617	1,661
Gwynn, P. F., Agent, Wichita Falls	2,571	6,582
Gohman Oil Co., Rockdale	1,678	4,258
Hyer, Fred, Ft. Worth	761	1,454
Hamilton, Robt. et al, Eastland	549	1,375
Helvetia Oil Co., San Antonio	17,593	34,270
Hinson & Tidwell (Shimmell Le), Graham	3,030	7,930
Hinson & Tidwell, Graham	1,101	2,785
Harwell, C. H. & O. E., Abilene	492	1,248
Howard Duffield & Berlin, Tulsa, Okla.	1,277	2,672
Henderson, E. R., Trustee, Tulsa Okla.	329	735
Humphrey & Merritt, Wichita Falls	2,350	5,827
Humble Oil & Refining Co., Houston	3,319,736	7,263,086
Hamilton & Wilson, Wichita Falls	5,072	13,249
Hester Hawkins & Ferguson, Tr., Wichita Falls	4,497	11,944
Hester Hawkins & Staley, Wichita Falls	1,398	3,328
Hutchinson County Oil Co., Amarillo	1,072	1,517
Hyde Production Co., Houston	8,190	13,753
Houseman, D. H. & Co., Dallas	26	62
Hankamer Earl C. & Co., Sour Lake	1,341	2,065
Hardy Oil Co., Wichita Falls	1,467	3,613
Hueco-Ranger Oil Co., El Paso	280	664
Hub Oil Co., Dallas	422	1,148
Howell, J. H., Trustee, Electra	231	591
Herbert Oil Co. of Texas, Ft. Worth	1,827	4,823
Harvey, B. A., Houston	2,055	3,019
Habif J., Los Angeles, Calif.	156	296
Hemby, J. M., Electra	924	2,397
Houston Oil Co. of Texas, Houston	26,764	44,048
Hoobson & Voorhees, San Antonio	1,398	2,992
Holmes & Huey, Amarillo	16,440	26,514
Hardie, J. M., & Co., Sour Lake	921	1,402
Hefley, McIntosh & Thomas, Cameron	981	2,331
Hitchman & Howard, San Antonio	833	1,753
Hickory Oil & Gas Co., Ft. Worth	296	669
Hamon, Jake L., Jr., Ardmore, Okla.	14,427	34,291
Hammon, Heyser, Garrett & King, Wichita Falls	4,666	12,797
Hammon, Garrett & Thornberry, Wichita Falls	6,231	16,762
Hammon & Heyser, Wichita Falls	377	991
Hammon, Heyser & Garrett, Special, Wichita Falls	40,632	83,333
Hammon Wayne H., Special Acct., Wichita Falls	2,209	5,767
Holbrook & Woods, Wichita Falls	10,060	26,719
Hammon, Heyser & Garrett, Wichita Falls	3,759	9,992
H. Y. Oil Co., Ft. Worth	12,345	29,923
Hockaday & Shaw, Wichita Falls	2,253	5,660
Houghland Production Co., Wichita Falls	4,613	11,257
Hooser, John W., Dallas	13,815	29,380
Hooser Oil Co., Dallas	14,952	33,643
H. A. S. Oil Co., Wichita Falls	194	444
Hofmeier & Deegans, Ft. Worth	725	1,702
Hamilton, H. L. (Partnership), San Antonio	7,472	18,222
Hart-Mexia Syndicate, Ft. Worth	856	2,156
Humphreys Corporation, Houston	150,701	321,448
Hart Oil Co., Ft. Worth	704	1,770
Hambleton, George, San Antonio	671	1,391
Hull Oil Co., Houston	25,144	38,831
Hanlon Gasoline Co., Tulsa, Okla.	524	1,137
Hughes, J. K. Oil Co., Mexia	55,520	127,561
House & Lewis Oil Co., Cameron	1,009	2,472
Hoppes, W. T., Burkburnett	172	430
Halmack Oil Co., Dallas	3,306	7,875
Hoffer Oil Corporation, Ft. Worth	4,513	11,870
Houston Production Co., Houston	24,259	39,744
Holmes & Riley, Amarillo	21,536	36,431
Horn, J. E. & E. S. Horn Trustee, Kansas City, Mo.	503	1,304
Hightower, M. C., Cisco	6,434	12,875
Hagaman Refining Corp., Ranger	751	1,792
Hereford Oil Co., Electra	5,466	13,718
Homaokla Oil Co., Oklahoma City, Okla.	4,638	12,962
Howard Petroleum Corporation, Tulsa, Okla.	2,371	4,974
Harris Fisher Oil Co., Cisco	1,262	3,067
Hanover Co. (The), Inc., Wichita Falls	3,261	7,424
H. B. J. Oil & Gas Trust, Baltimore, Md.	1,543	4,014
Hope Oil & Gas Co., Tulsa, Okla.	16,128	38,032
Hobbs Oil Co., Tulsa, Okla.	4,552	11,422
Hammond L. P., Wichita Falls	1,040	2,548
Hughes, J. K. Devp. Co., Mexia	429,123	406,098
Hardy Oil Co., Wichita Falls	1,309	3,234
Hughes, Wm. K., Trustee, St. Louis, Mo.	1,262	2,863
Hamilton & Martin, Wichita Falls	4,963	12,309
Haggard, J. E., Wichita Falls	1,492	3,730
Infield Petroleum Co., Austin	1,426	3,608
Ilseng, A. G., Ft. Worth	346	870
Ilseng Production Co., Ft. Worth	7,517	17,688

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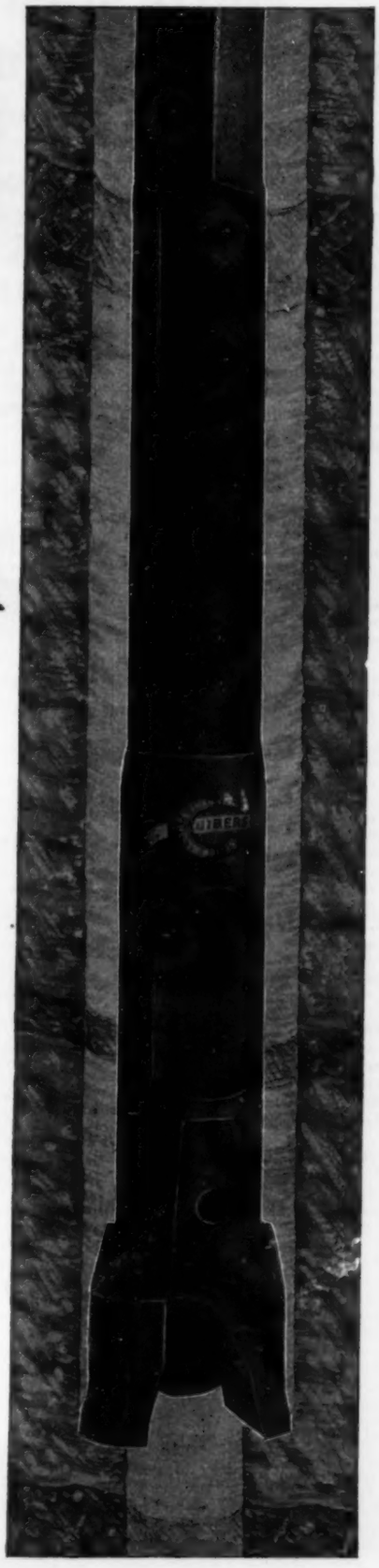

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Say you saw it in The OIL WEEKLY

Name and Address—	Barrels	Value
Interocean Oil Co., Tulsa, Okla.	19,868	48,389
Independent Oil & Gas Co., Tulsa, Okla.	68,808	102,189
Idaho Oil Co., San Antonio	2,138	4,370
Jacob Oil & Gas Co., Graham	1,059	2,665
Janellen Oil Co., Tulsa, Okla.	190	377
Julia Oil Co., Sour Lake	4,451	6,845
Jennings Oil Co., Yoakum	7,306	18,472
Jones, C. A., Strawn	234	502
Jones, J. A., Moran	803	2,175
Jackson, T. H., Sipe Springs	359	823
Jackson, J. S. Trustee, Sour Lake	3,241	4,972
Jones, J. E., Wichita Falls	1,698	4,549
Japhet Production Co., Houston	26,094	43,990
Junior Oil Co., Cross Plains	2,794	8,071
Jones, W. A., Minerva	399	1,017
Johnson, O. C., Trustee, San Antonio	1,624	2,030
Jones Oil Co., Wichita Falls	3,649	9,599
Jonray Oil Co., San Antonio	3,677	6,768
Jackson Company, San Antonio	1,587	3,169
Jameson Charles M., Moran	1,541	4,076
Jones, Edwin M., ElDorado, Ark.	37,193	90,433
Judson Oil Co., Tulsa, Okla.	14,500	38,474
Junior Oil & Pipe Line Co., Corsicana	1,407	1,759
Kent Middleton Refining Co., Corsicana	25,152	62.098
Keith, E. F., Desdemona	1,559	3,826
Kornfeld, Mrs. Fannie, Tulsa, Okla.	270	561
Kerr, T. P., Corsicana	337	802
Kemp-Munger Allen Oil Co., Wichita Falls	8,332	21,712
Kimmell & Dillard, Wichita Falls	5,759	14,175
Kleinfelder, B. F., Breckenridge	1,969	4,633
Kendrick, P. S., Albany	621	1,326
Kent, C. C., Corisicana	64,769	157,079
Kuhlemeier-Kleiner Oil Co., Cisco	1,002	2,536
Kell, Frank, Wichita Falls	120	308
Klemcke, George, Trustee, Von Ormy	2,866	5,958
Kavanaugh Petroleum Co., Houston	1,674	4,102
Kolp, George F., Electra	17,088	42,350
Kishi K., Terry	4,362	6,980
Kewanee Oil & Gas Co., Titusville, Pa.	16,662	43,959
Kolp, C. F., Agent, Electra	2,419	5,885
Kolp, C. F., Electra	1,157	2,914
Kemrow Company, Wooster, Ohio	16,153	42,962
Keen & Wolf Oil Co., Shreveport, La.	18,768	28,849
Kaufman, L., San Antonio	521	902
King Royalty Co., Wichita Falls	13,154	34,685
Kirby Petroleum Co., Houston	14,543	32,950
Knotts, F. F., Wichita Falls	726	1,933
K. & S. Corporation, Laredo	43,453	54,316
Kale-Gracey & Diver, Nocona	5,118	6,397
Kistler Frank & Co., Denver, Colo.	86,607	155,893
Kleiner Bros., Cisco	338	857
Kurz Oil Co., Somerset	561	1,016
Keener Oil & Gas Co., Tulsa, Okla.	5,317	13,231
Kone Production Co., San Antonio	22,126	61,787
Kate Bell Oil Co., Dallas	1,618	4,178
Keough Bros., Cisco	5,239	14,915
Killam, O. W., Laredo	2,447	3,059
Keystone Production Co. of Texas, Ft. Worth	5,453	14,123
Kirk & Brewer, Gorman	3,748	10,010
Lake Erie Trust Co., Trustee, Cleveland, Ohio	885	2,336
Liberty Oil & Gas Trust, Baltimore, Md.	2,914	6,479
Lucky Six Oil & Gas Co., Brownwood	412	824
Lake View Oil Co., Sour Lake	18,900	29,002
Lee, Homer, Wichita Falls	3,760	10,129
Long F. M., Humble	801	1,267
Lake Erie Trust Co., Cleveland, Ohio	970	2,426
Lamb, George E. Brownwood	116	269
Long Roy Oil Co., Navasota	2,594	6,749
Letwin, Sam, Breckenridge	2,089	4,926
Laclede Petroleum Co., Dallas	87	174
Lesh, P. F., Wichita Falls	3,293	7,936
Lencook Oil Co., Electra	1,156	3,017
Little, Wm., Breckenridge	243	537
Light Oil Co., Beaumont	260	366
Lucey Petroleum Co., Dallas	1,064	2,579
Leonard Oil Co., Somerset	412	812
Leonard, George, Somerset	264	364
Lucky Ten Oil Co., Amarillo	64,984	95,454
Lowrie, A. L., Pittsburg, Pa.,	946	1,562
Lamb, George E., Brownwood	100	221
Lawson Eugene B., Nowata, Okla.	84,190	212,136
Lytle Oil Association, Lytle	370	642
Lesh-Kilcrease & Co., Nocona	12,653	22,222
Laredo Oil Co., Laredo	4,289	5,362
Lackey, W. G., Wichita Falls	8,634	21,414
Lomax, Thornton, Jr., Wichita Falls	21,052	56,546
Linedo Oil Co., Lincoln, Neb.	2,896	3,620
Langford, W. S., Wichita Falls	1,186	4,772
Little Caddo Syndicate, Ft. Worth	2,384	5,955
Lowe, Delaney & Carter, DeLeon	2,833	7,200
Louisiana Oil & Refining Co., Shreveport, La.	39,169	82,735
Lone Star Gas Co., Dallas	19,066	48,641
Lebow, C. H., Tulsa, Okla.	898	2,415
Lewis Oil Co. & Natl. Refg. Co., Pittsburgh, Pa.	53,629	112,434
Lewis Oil Co., Pittsburgh, Pa.	841	1,846
Lake Graham Oil Co., Houston	429	601
Lowry Oil Corporation, Wichita Falls	3,687	9,476
Lewis, J. E. et al, Eastland	2,115	5,110
Luckey, J. P., Rockdale	275	695
Lay Oil Co., Cisco	1,340	3,077
Lester M. V., Dallas	15,345	43,674
Lewis, M. L., Wichita Falls	1,424	3,693
Lanier, C. C., Gainesville	8,831	18,110
Magnolia Petroleum Co., Dallas	2,894,221	5,131,610
McKanna, James E., Wichita Falls	66,171	183,762
Mann, J. A., Graham	1,356	3,648
McIlroy Oil Co., Amarillo	24,892	40,067
Marsalis Bros., Humble	3,315	4,972
Maxson & Co., Wichita Falls	2,550	6,561
McDonald, W. W. et al, Dallas	5,014	11,670
E. R. McDaniel, Cisco	1,724	4,506
McLester Oil Co., Breckenridge	5,227	12,013
McCutcheon, C. E., Trustee, Wichita Falls	9,141	23,539
McMan Oil & Gas Co., Tulsa, Okla.	321,619	602,503
McLester Oil Co., Eastland	26,234	47,520
McGregor Stanley & Gwynn-Boyd, Wichita Falls	5,458	13,369
McCarter, R. C., Cisco	352	863
McDonald, A. E., Putnam	5,374	13,969
Macknold Co., San Antonio	303	575
McCrary, T. W., Tulsa, Okla.	2,634	5,969
McMurray, T. C., Receiver, Ft. Worth	6,835	16,265
McCarty Oil Co., Wichita Falls	102,687	265,711
McEwan, J. P. Trustee, Ft. Worth	2,645	6,242
McNamaar Oil Co., Beaumont	3,997	6,092
McLester Jerome, Cisco	1,188	2,863
McNallen & Griffin, Tulsa, Okla.	5,781	13,319
McCulre, W. D. & Son, Iowa Park	1,075	2,834
McBride, W. C., Inc., St. Louis, Mo.	3,676	7,203
Mann & Cosmopolitan Oil Co., Wichita Falls	1,304	3,130
Marshall, L. G., Houston	9,121	14,164
Mary Elizabeth Oil Co., Dallas	7	18
Maben Oil Corp., Wichita Falls	410	945
Majestic Gasoline Co., Ft. Worth	53	108
Mennis, G. W., Dallas	3,704	9,337
Midwest & Gulf Corp. of Texas, Tulsa, Okla.	448	859
Mook-Texas Oil Co., Ft. Worth	4,813	11,431
Muse & McDermott, Ft. Worth	505	1,213
Minor Oil Co., Beaumont	8,504	12,331
Marland Oil Co. of Texas, Ft. Worth	1,400,011	2,583,068
Moran, W. J., Wichita Falls	2,125	5,545
Mills & Garrity, Corsicana	1,594	3,188
Marnet Oil & Gas Co., Tulsa, Okla.	4,626	11,107
Martin & Harrison, Houston	2,884	4,491
Moore & Henderson, Tulsa, Okla.	557	1,366
Meridian Petroleum Corp. of Texas, Tulsa, Okla.	4,610	11,141
Midwest Exploration Co., Amarillo	69,315	143,999
Matadoe Oil & Gas Co., Quanah	341	869
Moore, N. A., Eastland	804	1,777
Mohegan Oil Co., Mohegan Lake, N. Y.,	325	732
Mancill, R. W., Trustee, Cisco	639	1,673
Montgomery Rea & Montgomery, Sedwick	4,717	11,557
Mendenhall Oil Co., Cross Cut	7,114	19,067
Maer & Staniforth, Wichita Falls	8,112	18,684
Magee & Stipe, Electra	2,182	5,740
Magee Bros., Electra	1,120	2,914
Milham Corporation of Texas, San Antonio	139,934	314,600
Medina Oil & Gas Association, San Antonio	349	678
Mid-Kansas Oil & Gas Co., Findlay, Ohio	91,278	220,865
Moutray & Son, Abilene	779	1,778
Moutray Oil Co., Abilene	5,043	13,583
Madison Oil & Gas Co., Ft. Worth	9,182	25,520
Minerva Petroleum Co., Minerva	1,996	5,020
Miller & Miller, Putnam	2,126	5,393
Margay Oil Corporation, Tulsa, Okla.	4,780	11,738
Mid-Continent Petroleum Corp., Tulsa, Okla.	22,959	58,029
Mahlstedt Oil Co., Ft. Worth	2,047	5,550
Morton, A. D., Bartlesville, Okla.	419	927
Mintex Oil Corporation, Wichita Falls	804	1,916
Moss & Keeling, Mexia	7,956	21,403
Moss & Urscherl, Mexia	2,806	6,553
M. & V. Oil Co., Wichita Falls	11,333	29,888
Milam Production Co., Rockdale	1,872	4,738
Meredith, J. D., Moran	3,851	7,851
Moss & Keeling, Mexia	98,243	249,537
Moody Corporation, Houston	53,205	67,039
Muse & Robertson, Wichita Falls	33	84
Middleton, J. H., Collinsville, Okla.	2,209	3,937
Mecon Oil Co., Houston	13,099	20,018
Murchison & Fain Oil Co., San Antonio	81,456	113,681
McGlothlin, Mrs. L. W., Burkburnett	880	2,010
Miller Oil Co., Electra	2,226	4,241
Moore, F. L., Trustee, Tulsa, Okla.	4,020	10,155
Mann & Forbes, Graham	2,562	6,660
Murchison & Fain Oil Co., Wichita Falls	126,347	322,162
Number Nine Oil Corporation, Tulsa, Okla.	3,243	8,251
Necessity Oil Corporation, Dallas	3,279	6,349
Norba Oil Co., Wichita Falls	807	2,171
Nortex Drilling & Devp. Co., St. Louis, Mo.	375	953

(Continued on page 68)

"Our Franklin Valveless Engine Runs Like a Cadillac"

That's what W. J. Bradley, driller for the Twin State Oil Company, thinks of his power plant. And no wonder! Look at his record.

500 Feet of Hole in One Week

On the Twin State wildcatter at Stillwater, Oklahoma, Mr. Bradley put down 500 feet of 24-inch hole in seven days drilling. But speed isn't all the Franklin Valveless gives you.

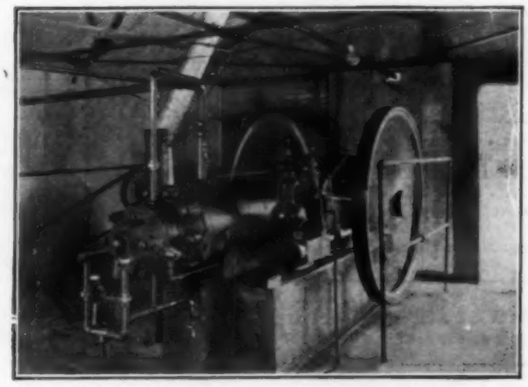
Saved $30.00 a Day

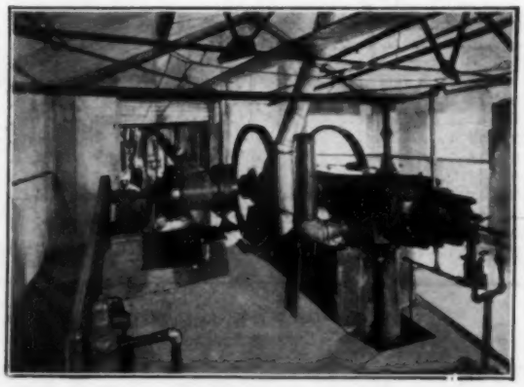
"If steam was used to drill this well," writes Mr. Bradley, "the cost would be about $25.00 a day for fuel oil, and the water which had to be pumped ½ mile, would cost $10.00 a day. The cost of our Franklin Engine is $2.50 a day for water and the same for fuel oil—meaning a saving of $30.00 per day on these two items alone."

Twin State Oil Company certainly got hold of two good men when they took on Ray Goff, Tool Dresser, and W. J. Bradley, Driller—shown here on the Stillwater wildcat location.

What About Your Drilling Costs?

More than one owner has found it costs him less to scrap his boiler and engine and put in a Franklin Valveless than to keep up repairs on his fuel-eating steam outfit. Ask the nearest representative for some facts and figures on the operating and maintenance costs of Franklin Valveless Oil and Gas Engines.





These two photographs give you a good idea of a Franklin Valveless Oil Drilling Engine on the job. A neat, clean installation that requires practically no attention for days on end. The Franklin Valveless is fully controlled from the derrick—fast, flexible, powerful, economical.

FRANKLIN VALVELESS ENGINE COMPANY

FRANKLIN, PENNA.

Atlas Supply Company,
Muskogee, Oklahoma and Branches
New Martinsville Supply Co.,
New Martinsville, W. Va.
Bradford Sales Co., Bradford, Penna.

Distributed by
Washington Engine & Pump Co.
Washington, Pa.
International Supply Co.,
Tulsa, Oklahoma and Branches
Wooster Tool & Supply Co., Wooster, Ohio

Atha Supply Co., Zanesville, Ohio.
McEwen Brothers, Bolivar, N. Y.
American Tank Co. of Colorado,
Casper, Wyoming

FRANKLIN
VALVELESS ENGINES
THEY BEAT STEAM AT EVERY TURN

CRUDE OIL PRICE QUOTATIONS

Crude Price Changes

November 18.—Effective at the opening of the market today Joseph Seep Purchasing Agency posted crude cuts averaging 25 cents on all grades of crude purchased in the eastern states.

November 23.—Effective at the opening of market today, Magnolia Petroleum Company announced a posting of $1.50 on Iatan crude.

Current Postings

EASTERN STATES

	Nov. 24 1926
New York Transit	3.15
Bradford District	3.15
National Transit	3.05
Southwest	3.05
Eureka	3.00
Macksburg	3.05
Gaines	2.85
Somerset medium	2.20
Somerset light	2.35
Cabell	2.10
Ragland	.95
Corning	2.25
Keister	1.80

CENTRAL STATES

Illinois	2.10
Indiana	1.98
Lima	2.21
Plymouth	1.63
Princeton	2.10
Waterloo	1.35
Wooster	2.25

WESTERN KENTUCKY

Posted by Stoll Refining Company for crude from Allen, Warren, Franklin, Davies, Barren, Cumberland and Monroe Counties

All grades	2.35

MID-CONTINENT

Prairie, Sinclair, Gulf, Texas and Magnolia

Below 28 (Magnolia only)	1.30
28 to 28.9 gravity	1.50
29 to 29.9 gravity	1.55
30 to 30.9 gravity	1.60
31 to 31.9 gravity	1.65
32 to 32.9 gravity	1.70
33 to 33.9 gravity	1.75
34 to 34.9 gravity	1.80

	Nov. 24 1926
35 to 35.9 gravity	1.85
36 to 36.9 gravity	1.90
37 to 37.9 gravity	1.95
38 to 38.9 gravity	2.00
39 to 39.9 gravity	2.05
40 to 40.9 gravity	2.10
41 to 41.9 gravity	2.15
42 to 42.9 gravity	2.20
43 to 43.9 gravity	2.25
44 to 44.9 gravity	2.30
45 to 45.9 gravity	2.35
46 to 46.9 gravity	2.40
47 to 47.9 gravity	2.45
48 to 48.9 gravity	2.50
49 to 49.9 gravity	2.55
50 to 50.9 gravity	2.60
51 to 51.9 gravity	2.65
52 and above	2.70

NORTH AND CENTRAL TEXAS

Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran, Somerset, Big Lake and Nocona crude

Humble O. & R. Co.* and Texas Co.

Below 28**	1.40
28 to 28.9 gravity	1.50
29 to 29.9 gravity	1.55
30 to 30.9 gravity	1.60
31 to 31.9 gravity	1.65
32 to 32.9 gravity	1.70
33 to 33.9 gravity	1.75
34 to 34.9 gravity	1.80
35 to 35.9 gravity	1.85
36 to 36.9 gravity	1.90
37 to 37.9 gravity	1.95
38 to 38.9 gravity	2.00
39 to 39.9 gravity	2.05
40 to 40.9 gravity	2.10
41 to 41.9 gravity	2.15
42 to 42.9 gravity	2.20
43 to 43.9 gravity	2.25
44 to 44.9 gravity	2.30
45 to 45.9 gravity	2.35
46 to 46.9 gravity	2.40
47 to 47.9 gravity	2.45
48 to 48.9 gravity	2.50
49 to 49.9 gravity	2.55
50 to 50.9 gravity	2.60
51 to 51.9 gravity	2.65
52 and above	2.70

Corsicana Heavy $1.25 per barrel, posted by Magnolia.

***Until further notice, Ranger, North Texas, Mexia, Powell, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes purchased by the Humble Oil and Refining Company, of a gravity lower than 28 degrees will be paid for with a corresponding decrease of five (5) cents per barrel for each lower degree of gravity.**

****Humble does not post on below 28.**

SOUTH TEXAS

	Nov. 24 1926
Mirando	1.25

SOMERSET

Grayburg and Pioneer

28 to 28.9	1.25
29 to 29.9	1.30
30 to 30.9	1.36
31 to 31.9	1.54
32 to 32.9	1.62
33 to 33.9	1.70
34 to 34.9	1.78
35 to 35.9	1.86
36 to 36.9	1.94
37 to 37.9	2.02
38 and up	2.10

GULF COAST

Grade "A" all companies	1.40
Grade "B"	1.40
Gulf Coast Light Oil, Below 25	1.40
25 to 25.9	1.45
26 to 26.9	1.50
27 to 27.9	1.55
28 to 28.9	1.60
29 to 29.9	1.65
30 to 30.9	1.70
31 to 31.9	1.75
32 to 32.9	1.80
33 to 33.9	1.85
34 to 34.9	1.90
35 to 35.9	1.95
36 to 36.9	2.00
37 to 37.9	2.05
38 to 38.9	2.10
39 to 39.9	2.15
40 and above	2.20

***Humble Oil and Refining Company's postings on Gulf Coast Light stop at 35 to 35.9. Its price on all crude above 35 is $1.95 per barrel.**

Magnolia Petroleum Company's posting stop at 31 to 31.9.

(Continued on page 54)

California Crude Oil Prices at the Well

Following are the current prices offered by Standard Oil Company for crude oil at the well: (Price per barrel of 42 gallons in fields indicated)

Gravity (degrees)	Signal Hill	Huntington Beach	Inglewood	Olinda-Brea Canon	Rosecrans Dominguez	Torrance	Richfield	Whittier	La Habra	Montebello	Coyote Hills	Santa Fe Springs	Newhall	Midway-Sunset Elk Hills	McKittrick	Lost Hills	Coalinga	Kern River	Wheeler Ridge
14-14.9	$ .85	$ .85	$ .85	$ .85	$ ..	$ .85	$ .85	$ .85	$ .85	$ .85	$ .85	$ ..	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75	$ .75
15-15.9	.87	.87	.87	.87	..	.87	.87	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
16-16.9	.90	.90	.90	.90	..	.90	.90	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
17-17.9	.94	.94	.94	.94	..	.94	.94	.85	.85	.85	.85	..	.75	.75	.75	.75	.75	.75	.75
18-18.9	.98	.98	.98	.98	..	.98	.98	.86	.86	.86	.86	..	.75	.75	.75	.75	.75	.75	.75
19-19.9	1.04	1.04	1.04	1.04	..	1.04	1.04	.87	.87	.87	.87	..	.75	.75	.75	.75	.75	.75	.75
20-20.9	1.10	1.10	1.10	1.10	..	1.10	1.10	.89	.89	.89	.90	..	..	.82	..	.82	.79	..	.78
21-21.9	1.16	1.16	1.16	1.16	..	1.16	1.16	.91	.91	.91	.98	..	..	.90	..	.90	.86	..	.81
22-22.9	1.22	1.22	1.22	1.22	..	1.22	1.22	.94	.94	.94	1.06	..	..	1.00	..	1.00	.93	..	.85
23-23.9	1.28	1.28	1.28	1.28	..	1.28	1.28	..	..	.97	1.14	..	..	1.11	..	1.11	1.00	..	.89
24-24.9	1.34	1.34	1.34	1.34	1.34	1.34	1.34	..	..	1.01	1.22	1.02	..	1.22	..	1.22	1.07	..	.93
25-25.9	1.40	1.40	1.40	1.40	1.40	1.40	1.40	..	..	1.05	1.30	1.08	..	1.33	..	1.33	1.14	..	.97
26-26.9	1.46	1.46	1.46	1.46	1.46	1.46	1.46	..	..	1.09	1.38	1.16	..	1.44	..	1.44	1.21	..	1.01
27-27.9	1.52	1.52	1.52	1.52	1.52	1.52	1.52	..	..	1.13	1.46	1.24	..	1.55	..	1.55	1.28	..	1.05
28-28.9	1.58	1.58	1.58	1.58	1.58	1.58	1.58	..	..	1.17	1.54	1.32	..	1.66	..	1.66	1.35	..	..
29-29.9	1.64	1.64	..	1.64	1.64	..	1.64	..	..	1.21	1.62	1.40	..	1.77	..	1.77	1.42	..	..
30-30.9	1.70	1.70	..	1.70	1.70	..	1.70	..	..	1.25	1.70	1.48	..	1.88	..	1.88	1.49	..	..
31-31.9	1.76	1.76	..	..	1.76	..	..	..	..	..	..	1.60	..	1.99	..	1.99	1.56	..	..
32-32.9	1.84	1.84	..	..	1.84	..	..	..	..	..	..	1.72	..	2.10	..	2.10	1.63	..	..
33-33.9	..	..	..	..	1.92	..	..	..	..	..	..	1.84	..	2.21	..	2.21	1.70	..	..
34-34.9	..	..	..	..	2.00	..	..	..	..	..	..	1.96	..	..	..	2.32	1.77	..	..
35-35.9	..	..	..	..	2.08	..	..	..	..	..	..	2.08	..	..	..	..	1.84	..	..
36-36.9	..	..	..	..	2.16	..	..	..	..	..	..	2.16	..	..	..	..	..	..	..
37-37.9	..	..	..	..	2.24	..	..	..	..	..	..	2.24	..	..	..	..	..	..	..
38-38.9	..	..	..	..	2.34	..	..	..	..	..	..	2.31	..	..	..	..	..	..	..
39-39.9	..	..	..	..	2.44	..	..	..	..	..	..	2.44	..	..	..	..	..	..	..
40-40.9	..	..	..	..	2.54	..	..	..	..	..	..	..	..	..	..	..	..	..	..
41-41.9	..	..	..	..	2.64	..	..	..	..	..	..	..	..	..	..	..	..	..	..
42-42.9	..	..	..	..	2.74	..	..	..	..	..	..	..	..	..	..	..	..	..	..

WAR on WASTE!

THE SINCLAIR LAW OF LUBRICATION

for every machine
of every degree of
wear
there is a scientific
Sinclair Oil
to suit its speed
and seal its power

SINCLAIR OILS
REG U.S. PAT. OFF.

A POWERFUL weapon in Sinclair's "War on Waste" is the Sinclair Law of Lubrication. This law tells the motorist that his engine has a *"degree of wear"* which requires just the right grade of oil "to suit its speed and seal its power". And he should change the lubricating oil in his car to fit its changing "degree of wear".

In following this Law of Lubrication, Sinclair dealers are rendering a real service to motorists. There is a science behind it—there's a real service behind it. There is a "War on Waste" behind it—a war on inefficient and destructive operation of machinery. Sinclair Opaline Motor Oil increases the efficiency and prolongs the life of the engine! It helps the motorist maintain economical transportation.

Why not increase your gallonage, by using this common-sense method of motor-oil recommendation?

SINCLAIR REFINING CO.
45 Nassau Street, New York

Atlanta	Detroit	Kansas City
Chicago	Houston	Omaha

1916-26—Ten years of manufacturing and distributing petroleum products of quality

SINCLAIR OPALINE
REG U.S. PAT. OFF.
MOTOR OIL

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LULING

	Nov. 24 1926
Based on Contract	1.30

TEXAS PANHANDLE

Magnolia Petroleum Company

Hutchinson, Carson and Gray counties, all grades	1.25

Humble Oil & Refining Company

Hutchinson, Carson and Wheeler counties, all grades	1.25

Gray County

28 to 28.9 gravity	1.00
29 to 29.9	1.05
30 to 30.9	1.10
31 to 31.9	1.15
32 to 32.9	1.20
33 to 33.9	1.25
34 to 34.9	1.30
35 to 35.9	1.35
36 to 36.9	1.40
37 to 37.9	1.45
38 to 38.9	1.50
39 to 39.9	1.55
40 to 40.9	1.60
41 to 41.9	1.65
42 to 42.9	1.70
43 to 43.9	1.75
44 and above	1.80

Crane-Upton-Crockett Counties

Below 26 gravity	.80
26 to 26.9	.85
27 to 27.9	.90
28 to 28.9	.95
29 to 29.9	1.00
30 to 30.9	1.05
31 to 31.9	1.10
32 to 32.9	1.15
33 to 33.9	1.20
34 to 34.9	1.25
35 to 35.9	1.30
36 and above	1.35

Crane-Upton Counties

Kay County Gas Company

Below 26 gravity	.80
26 to 26.9	.85
27 to 27.9	.90
28 to 28.9	.95
29 to 29.9	1.00
30 to 30.9	1.05
31 to 31.9	1.10
32 to 32.9	1.15
33 to 33.9	1.20
34 to 34.9	1.25
35 to 35.9	1.30
36 and above	1.35

Kay County Gas Company and Gulf Pipe Line Company

Hutchinson and Carson Counties, All grades	$1.25

WYOMING-MONTANA

Wyoming

Byron	2.00
Ferris	1.80
Elk Basin	2.00
Grass Creek	2.00
Rock Creek	1.85
Lost Soldier	1.20
Lance Creek	2.00
Mule Creek	1.45
Notches	.65
Big Muddy	1.85
Osage	2.00
Hamilton Dome	.85
Pilot Butte	1.75
Torchlight-Greybull	2.00
Lander	1.10

Salt Creek

(Midwest Refining Company)

29 to 29.9 gravity	1.55
30 to 30.9 gravity	1.60
31 to 31.9 gravity	1.65
32 to 32.9 gravity	1.70
33 to 33.9 gravity	1.75
34 to 34.9 gravity	1.80
35 to 35.9 gravity	1.85
36 to 36.9 gravity	1.90
37 to 37.9 gravity	1.95

Montana

Sunburst	1.35
Cat Creek	2.00

NEW MEXICO

	Nov. 24 1926
Artesia	1.65
Hogback	2.05

CANADIAN CRUDE

Oil Springs	2.68
Petrolia	2.61

*Bounty on Canadian crude is ¾ cent per gallon, or 26¼ cents per barrel

LOUISIANA-ARKANSAS

(Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and The Texas Co.) Homer, Haynesville, Caddo, El Dorado, De Soto and Chrichton.

Below 28 gravity	1.40
28 to 28.9	1.50
29 to 29.9	1.55
30 to 30.9	1.60
31 to 31.9	1.65
32 to 32.9	1.70
33 to 33.9	1.75
34 to 34.9	1.80
35 to 35.9	1.85
36 to 36.9	1.90
37 to 37.9	1.95
38 to 38.9	2.00
39 to 39.9	2.05
40 to 40.9	2.10
41 to 41.9	2.15
42 to 42.9	2.20
43 to 43.9	2.25
44 to 44.9	2.30
45 to 45.9	2.35
46 to 46.9	2.40
47 to 47.9	2.45
48 to 48.9	2.50
49 to 49.9	2.55
50 to 50.9	2.60
51 to 51.9	2.65
52 and above	2.70

Atlantic Oil Producing Company posts this same schedule on Homer, Haynesville, and West El Dorado.

Magnolia Petroleum Company has the same posting on Pine Island, Haynesville, Bull Bayou and El Dorado.

STEPHENS

Louisiana Oil Refining Company, Gulf Refining Company of Louisiana and Atlantic Oil Producing Company

Below 28	1.30
28 to 28.9	1.40
29 to 29.9	1.45
30 and above	1.50

SMACKOVER

(All companies)

27 and above	1.50
26 to 26.9	1.45
25 to 25.9	1.40
24 to 24.9	1.35
Below 24 gravity	1.10

Bellevue	1.40
Jennings	1.15
Vinton	1.50
Edgerly	1.50
Urania	1.10
Cotton Valley	1.20
Calion	1.10

Activity at La Barge

Casper, Wyo.—New York capitalists are becoming interested in the La Barge (Wyoming) field and have acquired considerable acreage in the immediate region. The Big Piney field, which is located nearby, is also coming in for a good share of the activity. Several new locations have been made and very few tests have been shut down for the winter. Diamond drills and rotary outfits are making their appearance. This is unusual as practically all the fields in Wyoming have been developed with standard rigs and cable tools.

Lease Jefferson County Wildcat Tract

Beaumont.—Yount-Lee Oil Company has leased more than 1600 acres of land in northwestern Jefferson County for the purpose of wildcatting in the future. The land obtained comprise six different tracts out of the Sophia Dean Survey, and were leased for a consideration of $25,000. The largest solid block included in the entire amount of acreage is 812.72 acres.

A one-sixteenth royalty was retained on a part of the land and 32nd royalty on the remainder. No clause was included in the deal specifying when drilling shall begin.

Big Gas Well Burning

Casper, Wyo.—Producers & Refiners Corporation has been unable to extinguish its flaming gas well on the Wertz structure, near the Lost Soldier field. The company estimates the open flow of gas at 50,000,000 cubic feet daily. The well drilled itself in last week and ignited after large quantities of sand and gravel were blown from the hole. A giant battery of boilers is being erected to extinguish the well by steam. The Wertz field at one time had the highest rock pressure of any field in the state. Its gas supply has been partially dissipated through its use at the Casper refineries. A 90-mile pipe line carries the gas from the field to Casper.

Shale Lease Conference

Denver, Colo.—Claimants to oil shale lands see a ray of hope in the announcement that Secretary of the Interior, Hubert Work, will grant a conference, beginning December 1, to work out some plan to reconcile the many claims to oil shale leases. Many leases had been granted by the department prior to the passing of the leasing bill in 1920. It was generally understood that those who had good claims prior to the passing of the bill would not have to comply with some of the provisions affecting claimants of recent date. The meeting is called for a broader interpretation of the leasing laws. The early claimants have not made the progress expected in clearing up the litigation involved. They are strongly opposed to any amendments which tend to place them in the same position as the applicants filing after February 25, 1920. Thousands of acres of valuable shale lands are involved.

W. P. Russell, prominent oil man of Bakersfield, California, died recently at his home. Mr. Russell has been identified as an oil operator in Bakersfield for the past 25 years. He is survived by his widow, two brothers and a sister, of Pennsylvania.

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CONTINENTAL

Panhandle Operating Problems Bring New Methods

Obstacles to be overcome require special equipment as well as changes in practice

*By T. O. BENNETT**
Engineer, Marland Oil Company

ONE of the biggest factors toward salvaging oil from pools that are already in is bringing them in properly and doing the work properly before they are brought in, and I want to touch on a few points with references to that, especially with reference to the Panhandle field.

One of the main things that I think has been largely overlooked is the conservation of gas from gas pools such as we have in the Mid-Continent territory. The application of pressure for the restoration of original rock pressure is being used more and more and I think we are all pretty well familiar with the results that have been obtained, but the question that has been overlooked is "Where are we going to get the gas to restore this depleted pressure?"

In the Mid-Continent field, especially in the Osage, you have a very large volume of gas produced from sands, nearly all of which have water in contact with the gas, or bottom water. One of the most important things that has been said for quite a while is to get the gas out of these fields and get as much as you can with a minimum loss or amount left behind.

This leads us up to the application of back pressure, which is another very important factor to be applied to gas as well as to oil fields. In fact, it probably has more application to gas wells and will lead to a greater recovery than it would when applied to oil wells.

Back Pressure.

In applying a back pressure to a gas well, it has been stated many times that you will keep the gas from coming out of the sand, because the greater the differential from the sand into the well bore the maximum amount of gas will flow into the well. This, however, affords a means of water encroachment as the bigger the differential the greater the possibility of water coming up in your gas well and closing up part of your bore space and excluding the gas from coming in.

We notice by actual experiment if we hold back pressures and pretty high back pressures on a well that the water is held down, and although you are operating against a much higher pressure you are able to take much large volumes of gas down, on account of covering a greater flow space.

The open flow measurements as taken and required in that State and other States do an enormous amount of damage to gas wells. Every time you open a well to flow to atmosphere to get a gauge of the well, it creates openings for water to come in, and every time you make an open flow test the well will make a greater open flow. A method has been worked out in the Mid-Continent where you can make an open flow without flowing it into the atmosphere.

Value of Gas

I mean this, because we will be wanting to use more and more gas all over the Mid-Continent field, where we have sand suitable to artificial restoration of rock pressure. If the gas is worth four cents a thousand at the well head, assuming that a thousand feet of gas, when put back into the sand, recovers a barrel of oil, which when refined has a market value of some $8, more or less, we can see that the use of artificial pressure restoration may have an economic effect on the consumption of gas in the future, and whether it will be used for domestic and industrial purposes or used to recover such oil, which will have a greater total value than the gas in the first place.

I want to touch now on just a few things that are disjoined, that is, separate, that have been used successfully in the Mid-Continent and California fields and other fields toward increasing the recovery. One of these is the use of proper counterbalances on pump wheels.

Counter-Balancers

It has recently been discovered that the use of band wheel counter-balancers properly balanced and using dynomometers to properly balance them, taking the so-called indicator grade, we might call it, off of the band wheel balance when it is put on to get the proper balance, permits of high pumping speed with a long stroke and the speeds that may be obtained that way in deep wells will permit strokes up to 22 per minute, and it has been found that the total lift per minute that way is equivalent to the hydraulic long-stroke pumps, and the expense is not so much and it has been giving very saitsfactory service in California and Oklahoma.

One other important point is where the gas lift is in general application, or before it is in general application, where a well starts to flow and then goes down and starts to flow by heads. At the time it first starts flowing by heads an auxiliary lift can be put in to keep up the flowing period and decrease the gas factor. By that I mean the gas that is in the oil. If you supply auxiliary gas from the surface the amount of gas dissolved in the oil will be retained longer and will give you a greater migatory power from the bore space back of the well bore into the well, supplying the necessary gas and raising the oil to the surface. One other means along that same line is to keep suitable oil saver heads, tubing oil saver bands, such as a time when a well might flow naturally and then flow by heads, it might be tubed and flow through the tubing for a much longer period without putting in artificial pressure or a gas lift, because we can get a greater efficiency through a smaller line in lifting oil from a well.

Panhandle Paraffin Situation

In the Panhandle one of the biggest difficulties of operation is the paraffin situation. Oil in that field ranges in the ground from 83 degrees up to about 90 degrees. This oil is from 2900 to 3000 feet. It should be up around 120 to 150 degrees, as compared to other oils in the United States. On top of this the oil in the Panhandle congeals to a solid ball of wax at from 55 to 60 degrees, which gives a margin on an average of about 20 degrees to get the oil from the sand into the pipe lines or points of use.

The gas pressure in the Panhandle field is about 420 pounds, which is about half of the hydrostatic head. It is not sufficient to flow the wells, that we term the flow wells, in the Panhandle. They are not what I would call flow wells, because if you shut in one of those wells and open it up again the well is dead and it is necessary to swab or agitate the gas with the oil to make it come back, and the oil in most of those wells that are called flow wells is produced in a spray form. The gas factor is extremely high and there is an enormous amount of gas in that field which has been wasted at as great a rate as the volume exists. It is estimated that in that field that the original supply of gas

*Paper presented before the meeting of the A. S. M. E. at Tulsa, October 12.

was about one hundred and twenty quadrillion feet. Now, to get an idea of how much that means, if we take the peak load during the closing month of the year in Texas and ran that every day in the year, there was enough gas in the Panhandle originally to run the State of Texas for 166 years. That gas is in a lime above the main pay. It varies up to 500 feet thick at different points in the field. Between the big gas and the pay it varies up to 150 feet, which in one part of the field is in a lime and in another a granite wash. There is a shale break which varies up to 100 feet or so.

They are unable to drill in with the hole loaded. They put unhydrated lime in the hole and then water. The water slackens down the unhydrated lime and sticks the tools in the hole. For that reason they are unable to use a rotary.

We, and others, I believe, are working on a method of trying to doctor this solution, so to speak, to be able to drill with a hole loaded with fluid and so save the gas. At the present time I estimate that 100,000,000 cubic feet of gas is wasted in the Panhandle daily.

The pressures indicate that the upper gas is in contact with the oil bed only in spots. We don't know where they are, but the pressure declines the same in each one and since they are both less than the hydrostatic head, it leads us to believe that they are in contact, and at the points where they are in coarse sands or the coarse porosity between the two is probably the areas of most prolific production.

Bentonite

In the oil sand itself, or in the lime rather than the sand, there are strips of Bentonite shale and when water hits this shale it swells up to several times its volume and it is a very difficult proposition to handle. You have to fight some of those wells for a period of months to get them cleaned out. If a well on production is shut in for two or three days it will be two or three months before you can get it to normal production again. That is due to mud slacking down and plugging the sand around the well and also due to the accumulation of paraffin on the face of the well bore. After you start producing again, if it is a paraffin of temperature of the oil, the oil will gradually cut that out. On the other hand we find that in some of those wells the paraffin is actually keeping the gas in with the oil, and when it does we get an exhaustion which refrigerates that oil to such a point that the paraffin congeals and that paraffin is more or less in a helpless form in the oil. It then takes usually one or two months in cleaning out.

Some of the companies in the Panhandle field have used hot water and let it stand on the face of the sand to dissolve the paraffin. Others have used butane or high gravity gasoline to dissolve the paraffins.

Where it is mud it must be taken out by other means, and where you get the Bentonite shale you cannot pick it up with a bailer. It is very plastic. It is necessary in drilling in to provide suitable minerals in the well to keep this caving mud from rolling in and instead of fighting the mud out we find it better to properly line the well and keep it dry in the first place.

In flowing wells most of the paraffin is floated or swabbed up through the casing and we get a gradual accumulation of paraffin which becomes bigger as we approach the well head. Paraffin scrapers have been developed which successfully cut down this paraffin and clean the casing and which will not ruin the tubing. It consists of a special cutter, that is we call it a cutter, working both up and down, scraping the paraffin clean of the casing.

Gas Lift

It is necessary to blow pumping wells in that territory very frequently. For that reason we have recently been experimenting with the gas lift. In this experimenting we have come in contact with problems which have not been dealt with in any other field in the United States, because if we are able to make the gas do the work on the oil it necessarily must expand and in so doing lowers the temperature. This temperature drop, if we use efficient size lines, causes the paraffin to congeal in the flow lines and in a short time the lines become closed up and you have to pull them and clean them out. In pumping wells it is necessary to clean out in four or five days.

The induction of live steam at the casinghead has given satisfactory results in many cases. The steam serves to melt the paraffin down and it floats out with the oil.

In the gas lift we try to avoid the paraffin situation by the application of hot gas. In flowing through the tube we are able to flow a well about five days and then it plugs up almost solid and the production gradually decreases. The hot gas going down keeps the tubing clean in the upper 700 feet, where you get the worst condition, and by the time it gets to 700 feet it has given up all of its heat and from that point down to the liquid level the paraffin accumulates and makes trouble. So far with this thing we have been entirely successful.

Use Chemicals

Certain chemicals have been used and there are some which actually raise the congealing point. They were put in a mixture and hot when put in. They temporarily lowered the cold point on account of the effect of the wax when hot, different results being accomplished. On standing for 24 hours we found that the oil treated had a higher congealing point than it had before and it did more damage. However, we hope that certain chemicals may be developed that we can put into flowing wells that will keep the paraffin out or keep it down in such form we can take it out. So far that has not been done.

Another important method of keeping production up in the Panhandle field is to provide suitable heaters on every phase of the pipe line for this oil. Outside of getting the oil to the well head, we have to lose more degrees in getting the oil into the pipe lines. It is necessary to install heaters of proper size and design at the well in order that you may heat the flow line. About 15 days ago they had a well in the Panhandle the temperature of the oil in which dropped to 83 or 84 and the production dropped down just about as the temperature did, because the flow lines all over the field were frozen up, and it is a pretty difficult proposition if you do not have adquate heat at all times to keep them going. In addition to the heat it is necessary to have a suitable means for blowing out flow lines and sky-tanks if for any reason the well happens to be down. Unless you had a heater on your flow line it would congeal and the line would be plugged up absolutely tight and have to be cleaned or steamed down. Our directions are to blow out the flow lines at any time the well might have to be shut in for repairs or other operations.

Swabbing

The installation of gas lift if successful, and we have hopes that we can make it successful in the Panhandle, will be one of the biggest things toward lowering the lifting cost in that field, because outside of the wells that are flowing by spray, the major portion of all the wells' production is accomplished by swabbing. Swabbing costs will probably run from $50 to $100 a day and will be extremely hard to conduct in cold weather. In addition to that some of those wells are drilled very close to bottom water and it is hard to keep from starting the water with a swab. As this water comes in it will gradually exclude the oil, because it has an easier path through the sands.

The wells that have been making some water on a swab, when put on the gas lift, the water disappeared entirely and we have made about the same production with the gas lift as we did with swabbing. We did not increase it because we felt we were getting every bit of oil out with the swabs that the well would make.

An important consideration there is in keeping down your gas factor. The production rate from the well should be maintained at the rate at which the oil can approach the well. If you exceed this rate by swabbing or fast pumping you will gradually cut down, is almost the reverse action of water. If you allow the gas to expand and give you a much larger gas factor, you

take the gas out at a greater rate than you would if you slowed the well up a little bit. You will find you obtain the maximum amount of oil with the minimum gas factor, from any well. That will prolong the life of the well and will give you a greater ultimate yield, where you are up against that problem.

Protection for Men

One other important thing in connection with production in the Panhandle field is the use of proper protecting devices for the workmen. That is going to be a mighty serious problem in the winter months where it gets pretty cold, and you have a hard wind b'owing most of the time. You must provide the men with the necessary safety devices.

Gas masks are generally being used for repair work to the wells, because we have large quantities of a high hydrogen sulphate. One good breath of that is sufficient to kill a man. We are providing ordinary masks for work such as gauging, but when a man has some repair work to do he uses a hose mask. If a man gets a good breath of that gas it is pretty nearly a hopecase at any time.

One other thing that is going to help keep up the production in that territory is the electrification. At the present time we are installing in the center of that pool a large steam turbine electric plant to supply power to the entire area, and another high tension line running out from Amarillo. Most of the major companies at the present are electrifying and will be ready to go on electric power, both for drilling and pumping, probably between the middle and the latter part of next month. This should keep up the production over the winter months much better than the use of steam on account of low temperatures that will be encountered.

That covers in general, I think, some of the major difficulties you are up against in keeping production up in the Panhandle area. There may be a whole lot more points, but summing them all up it looks like the Panhandle field has all the difficulties of all of the rest of the fields with a whole lot more added.

Water in Joint Test

Casper, Wyo.—The joint test of the Consolidated Royalty Oil Company, the Carter Oil Company and the Western Exploration Oil Company in the Billy Creek field has found the Muddy sand water-bearing at 4284 feet. The hole is standing more than half full of water. The companies have announced that the test will be carried to the Dakota formation if a satisfactory water shut-off can be made. If the well is a failure in the Dakota sand, the Sundance, a black oil formation will be tested. These companies have invested heavily in the structures in an effort to prove it for oil. Large gas wells have been completed but no commercial oil has been found.

Start 27 New Operations In Kevin-Sunburst

Great Falls, Mont.—A total of 22 wells were started in the Kevin-Sunburst field and its semi-proven extensions during the past week. This was a new record for the field for any previous week. The record-breaking number of new locations seems unusual in the face of certain cold weather, yet it is easily understood when the decline in production and the keen demand for Montana crude are considered. Every major operator is rushing tools into action.

The stray sands found in various parts of the Kevin-Sunburst field are being shot with good results. A stray formation often is found between the Sunburst and Ellis sands. Particularly is this true near the edge of the field. This irregular formation usually is very stingy, yielding only small wells. The Kalispell Oil Company recently shot one of these stray sand producers and increased the production from a few barrels to 75 barrels daily. In many cases wells have been abandoned outright because of the small production from this tricky formation. Singularly enough, the stray sand oil is often much better than the crude found in the deeper sands. Undoubtedly the practice of shooting very small wells in the stray sand will be increased.

Three additional wells were completed during the past week in the Flickertail, which is an extension of the Kevin-Sunburst field discovered only a few weeks ago. After the first producer was completed, an extensive development program was launched. The wells are not sensational but make excellent pumpers. The production holds up well toward the initial output.

Of the three wells completed, the Flickertail No. 2, is the best producer. The well did not flow but there is enough oil to make it a 24-hour pumper. Crude rose more than 1000 feet in the hole. The well is located on the northwest quarter of section 33-35-2 and is near the discovery well.

The Adams Oil Company's completion on the northeast quarter of section 33-35-1, is conservatively estimated at 100 barrels. This company was one of the pioneers in the extension and will complete another test in the region during the month.

The third well was completed by the Bottineau-Minot Oil Company and ranks as one of the best of the extension wells. The producer will be pumped, although it flowed spasmodically by heads. The company further extended the pool with this completion. It is nearly half a mile from the Flickertail discovery well.

The Devonian formation seriously promises to ultimately yield commercial production in the Kevin-Sunburst field. The Pondera-Valley Oil Company's deep test on section 17-34-1, has found a small quantity of oil at 3080 feet. The gas has been drowned so that drilling may continue. The pressure is very great, yet the gas flow is not large. The well has caused considerable trouble. A complete new rig was recently erected.

Start Oil Through Line From Laredo Area

Lardeo, Texas.—The initial shipment of Mirando district crude through Magnolia Pipe Line Company's 175 mile eight-inch line, which connects the Mirando district with Magnolia's trunk line system at Luling, was started November 12. Crude was fed into the line at the rate of one mile per hour, and it is estimated that approximately 60,000 barrels will be required to fill the line. The oil had not reached Luling late last week, owing to some changes being made at the field pump station, and a minor break in the main line.

Only one pump station, which is equipped with two 100 H. P. De La Vergne engines, and a pair of 7000 barrels daily capacity National Transit pumps, is at present on this long line, but materials are arriving for the construction of a similar type of station at Fant City, Live Oak County.

Buys Wildcat Interest

Wichita Falls, Texas.—Prairie Oil & Gas Company has acquired a half interest in two wildcat drilling blocks assembled in Cooke County by Arthur R. McElreath and F. W. Suggett, Wichita Falls operators, for a cash consideration of $50,000. The deal involves approximately 6000 acres surrounding the two drilling tests, which are to be drilled free of cost for Prairie. The wildcat test on the J. T. Biffle farm, Robert Shannon survey, about two miles east of Myra, is drilling below 1600 feet, while the second test, located on the J. W. Mount farm, S. P. railroad survey No. 9, is drilling below 1200 feet.

Empire Refinery Burns

Cushing, Okla.—Fire, originating from a broken main near the skimming plant of the Empire Company's refinery one mile north of here, practically destroyed the refinery Tuesday night with the exception of one unit that comprised the storage tanks. The damage is estimated at between $450,000 and $500,000. The stills were drained before the fire reached and destroyed them.

Edward T. Moore, president of the Simms Oil Company, has returned to headquarters at Dallas after spending several weeks in New York City.

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AVERAGE DAILY PRODUCTION FOR U.S.

United States Daily Average Production by Weeks

Figures below are taken from the complete revised estimates of the AMERICAN PETROLEUM INSTITUTE except for the current week, which are advance estimates issued by the A. P. I. and are subject to revision:

Week Ending	Oklahoma	Kansas	Texas (Outside Gulf Coast)	Gulf Coast	North Louisiana	Arkansas	Eastern States	Rocky Mountain	California	United States Total
March	454,762	103,300	260,262	92,712	48,787	165,312	97,625	102,325	604,500	1,929,562
April	467,175	101,825	263,612	88,812	50,562	169,824	100,875	106,675	600,000	1,947,387
May	463,750	105,690	277,700	94,550	58,150	175,430	105,700	112,300	602,720	1,995,990
June	**456,450**	**107,637**	**302,187**	**89,912**	**60,412**	**167,887**	**106,250**	**112,925**	**606,925**	**2,013,187**
July	456,920	110,320	336,600	114,760	57,460	161,870	104,700	108,520	613,940	2,062,470
August	465,137	111,600	381,560	161,237	56,787	157,375	108,350	110,737	609,725	2,162,662
September	465,387	113,037	402,212	175,512	56,575	154,037	110,125	105,825	598,100	2,180,862
October 2	470,500	115,150	413,250	174,400	58,200	151,100	110,000	101,650	600,000	2,194,250
October 9	474,950	114,800	430,350	167,450	57,900	150,150	109,500	96,600	602,500	2,204,200
October 16	486,150	114300	443,050	166,750	57,000	149,900	109,000	99,700	608,300	2,234,150
October 23	514,700	114,600	451,350	172,000	58,450	149,850	109,000	97,400	618,900	2,286,250
October 30	539,300	114,750	459,450	171,150	59,450	148,050	110,000	99,950	628,300	2,330,400
November 6	557,500	114,900	464,600	177,000	57,500	146,200	110,500	94,650	632,500	2,356,350
November 13	546,600	114,000	472,350	173,600	56,900	144,400	111,000	91,800	633,700	2,343,850
November 20	552,400	115,200	482,900	170,550	55,450	144,050	111,500	92,700	645,700	2,370,450
Increase over past week	5,800	1,200	10,550	.....	.....	.....	500	900	12,500	26,600
Decrease over past week	.....	.....	.....	3,050	1,450	350	.....	.....	.....	.....

Texas

NORTH

	Nov. 20	Nov. 13
Burkburnett	14,250	14,650
Electra	16,950	16,800
Iowa Park and K-M-A	4,450	4,000
Wilbarger	15,300	15,850
Hutchinson County	153,100	148,950
Panhandle, miscellaneous	14,500	13,200
Montague and Cooke counties	11,600	10,800
Archer County	34,600	34,800
Others	1,300	950
Totals	266,050	260,000

EAST CENTRAL

Mexia	11,250	11 300
Currie	800	800
Richland	1,400	1,400
Corsicana-Powell	24,200	24,700
Wortham	6,400	6,400
Nigger Creek	11,250	11,500
Totals	55,300	56,100

WEST CENTRAL

Stephens County	10,950	10,850
Eastland County	5,550	5,600
Desdemona	1,700	1,700
Young County	8,500	8,250
Palo Pinto County	450	450
Callahan County	3,450	3,450
Shackelford County	14,300	12,600
Regan County	30,150	31,150
Brown County	16,600	15,600
Coleman County	500	500
Crane-Upton counties	20,900	17,950
Others	2,100	1,650
Totals	119,150	113,650

SOUTHWEST

Luling	19,750	20,000
Laredo District	16,600	16,500
Somerset	2,000	1,950
Lytton Springs	3,250	3,350
Piedras Pintas	250	250
Others	550	550
Totals	42,400	42,600
Totals, Texas (outside of Gulf Coast)	482,900	472,350

GULF COAST

Goose Creek	7,500	7,650
Hull	20,800	21,400
Saratoga	1,200	1,250
Blue Ridge	1,550	1,800
Damon Mound	1,100	1,050
Batson	1,700	1,700
West Columbia	9,600	9,650
Humble	4,400	4,300
Pierce Junction	7,100	7,350
Sour Lake	6,350	6,800
Spindletop	79,550	81,800
Orange County	7,050	6,500
Edgerly	750	850
Evangeline	1,100	1,400
Vinton	6,050	5,800
Lockport	4,050	3,100
South Liberty	5,000	5,350
Big Creek	1,350	1,350
Boling	2,100	2,600
Others	2,200	1,900
Totals	170,550	173,600

Oklahoma

North Braman	27,100	25,600
South Braman	5,500	5,600
Blackwell	3,750	3,800
Hubbard	2,600	2,700
Thomas	2,050	2,050
Tonkawa	33,400	33,500
Garber	23,700	23,100
Burbank	44,900	46,800
Osage (outside Burbank)	34,400	34,450
Watchorn	3,750	3,750
Cushing	21,400	21,400
Yale Jennings	13,300	13,300
Davenport	5,350	5,600
Bristow Slick	26,900	26,950
North Okmulgee	17,400	17,400
Lyons Deaner	3,900	3,900
Stroud	1,950	1,950
Cromwell	19,450	14,650
Papoose	9,400	9,450
Wewoka	24,600	25,800
Duncan District	7,100	7,400
Graham	8,850	8,850
Fox	1,950	2,000
Healdton	15,000	14,950
Hewitt	11,000	11,000
Seminole	112,950	106,550
Scholem Alechem	9,000	8,050
Others	66,200	66,000
Totals	552,400	546,600

California

Seal Beach	5,400	2,500
Santa Fe Springs	45,500	46,500
Long Beach	96,000	95,000
Huntington Beach	77,500	66,000
Torrance	26,500	26,500
Dominguez	20,000	21,000
Rosecrans	14,500	15,500
Inglewood	40,000	40,000
Midway-Sunset	94,000	94,000
Ventura Avenue	57,300	57,200
Others	169,000	169,000
Totals	645,700	633,200

Kansas

Florence-Covert	1,900	1,900
Peabody-Ebling	4,100	4,100
Eldorado-Towanda	13,600	13,600
Augusta-Fox-Bush	4,950	5,000
Rainbow Bend	3,250	3,150
Russell	4,250	4,350
Greenwood County	45,150	45,000
Churchill	8,100	8,100
Others	29,900	28,800
Totals	115,200	114,000

North Louisiana

	Nov. 20	Nov. 13
Homer	5,450	5,500
Haynesville	8,750	8,800
Caddo Light	10,450	10 500
Caddo Heavy	3,450	3,850
Desoto-Red River	4,100	4,100
Elm Grove	500	550
Bellevue	1,750	1,800
Cotton Valley	6,950	6,950
Urania	14,050	14,850
Totals	55,450	56,900

Arkansas

El Dorado	6,600	6,500
Smackover Light	13,200	13,750
Smackover Heavy	114,200	114,000
Stephens	1,500	1,550
Nevada	1,900	1,950
Lisbon	6,650	6,650
Totals	144,050	144,400

Mountain States

WYOMING

Salt Creek	43,000	42,600
Grass Creek	3,100	3,000
Elk Basin	800	800
Big Muddy	3,150	3,200
Lost Soldier	5,600	5,500
Rock River	2,600	2,750
Teapot Dome	800	900
Lance Creek	1,000	1,150
Others	2,150	2,150
Totals	62,200	62,050

MONTANA

Cat Creek	2,600	2,600
Sunburst	14,000	15,000
Others	250	250
Totals	16,850	17,850

COLORADO

Moffat (Craig)	2,700	2,600
Fort Collins	3,400	3,400
Florence	550	550
Others	750	750
Totals	7,400	7,300

NEW MEXICO

Table Mesa	500	250
Artesia	3,000	3,000
Hogback	750	800
Rattlesnake	2,000	550
Totals	6,250	4,600
Totals Mountain States	92,700	91,800

EASTERN STATES

Including Illinois, Indiana, Ohio, Pennsylvania, West Virginia, Kentucky and New York	111,500	111,000

PRODUCTION SUMMARY

East of Rockies	1,632,050	1,618,850
United States	2,370,450	2,343,850

COMPLETIONS FOR PAST WEEK IN U.S. FIELDS

Summarized Review of Field Results

State—	Completions This Week	Completions Last Week	Producers This Week	Producers Last Week	Gas Wells This Week	Gas Wells Last Week	Failures This Week	Failures Last Week	Initial Production This Week	Initial Production Last Week
Arkansas	14	11	11	6	1	..	2	5	690	125
California	20	23	18	17	..	3	2	3	11,090	17,595
Colorado	1	..	..	..	..	..	1	..	....	.....
Indiana	4	2	3	1	..	..	1	1	120	15
Illinois	6	9	5	2	..	..	1	7	148	26
Kansas	25	25	15	15	1	3	9	7	2,232	2,828
Kentucky	21	27	16	20	2	2	3	5	510	317
Louisiana	20	23	10	10	..	3	10	10	803	1,110
Michigan	..	4	..	4	..	..	..	..	....	85
Mississippi	..	..	..	..	..	..	..	..	....	.....
Montana	10	1	10	1	..	..	..	..	1,095	50
New York	12	13	12	13	..	..	..	..	31	45
New Mexico	..	3	..	3	..	..	..	..	....	2,425
Ohio	69	96	21	31	34	36	14	29	641	1,024
Oklahoma	95	130	50	66	8	6	37	58	27,908	37,673
Pennsylvania	72	64	62	52	5	7	5	5	494	217
Tennessee	..	..	..	..	..	..	..	..	....	.....
Texas	195	191	131	134	11	9	53	48	42,824	47,163
West Virginia	37	24	5	5	31	13	1	6	73	70
Wyoming	2	4	1	2	..	..	1	2	50	130
Totals	603	650	370	382	93	82	140	186	88,709	110,898

Eastern States

PENNSYLVANIA

Company, Well and Location	Initial Production Bbls.	Depth
Bradford Field—		
South Penn Oil Co., Bingham 533, tract 84	2	....
Bingham 533, tract 85	3	....
Bingham 501, tract 17	2	....
Bingham 423, tract 15	2	....
Bingham 212, tract 40	2	....
Bingham 494, tract 56	2	....
Whipple 125	2	....
Whipple 126	3	....
Whipple 127	2	....
Rounds 57	3	....
Dent 104	2	....
Culbertson 56	2	....
Smith 130	2	....
Ware 81	2	....
Hazlewood Oil Co., Lot 21, tract 74	2	....
Bingham 370, tract 74	2	....
Petroleum Reclamation Co., Mott 18	3	....
Mott 19	3	....
Hamlin & Bovaird, Unknown 32	5	....
W. W. Slike & Co., Slike 8	4	....
Hungiville & Co., Hungivlle 26	7	....
Brown & Co. 1	3	....
Hooker & Co., Hooker 8	4	....
Edwin Jack, Jack 47	2	....
Jack 48	2	....
Lane & Co., Bingham 430, tract 72	4	....
Barry & Co., Barry 2	3	....
Huston & Lawrey, Huston 12	3	....
T. T. Fox, Franchot 15	3	....
M. C. Roat, Roat 8	3	....
Dana Estate, Dana 1	4	....
T. H. Kennedy & Co., Bingham 490, tract 144	3	....
Fitzgibbon & Wilson, Bingham 380, tract 81	3	....
J. E. Ward, Bingham 401, tract 17	3	....
Forest Petroleum Corp., Forest 1-B-1	3	....
Forest 1-A-13	2	....
Forest 1-A-17	3	....
Mohan & Grant, Bingham 4	4	....
J. A. Walters Estate, Walters 47	3	....
C. N. Knabb Trustee, Griffth 1	3	....
Coast & Storms, Hanes 1	4	....
Venango County—		
Alum Rock Gas Co., Shawkey 2	¶1	....
S. P. McCalmont Estate, McCalmont 50	*	....
Hoffman, Craig & Co., Myers 15	2	....
Hoffman, Porter & Co., Irwin 2	2	....
F. S. Gates, Fisher 20	2	....
James Foster, Foster 49	2	....
McKinley & Hoffman, Monjar 12	2	....
W. W. Splane Estate, Splane 33	2	....
Oil City Nat. Bank, Frampton Oil 13	2	....
McComb & Monjar, Hood 90	2	....
O. D. McDowell & Co., Miller 6	2	....
Center-Middle Field—		
Rembold & Co., Osten 10	3	....
R. L. Thomas, Dennis 13	2	....
Quinn, Haley & Co., Kehr 27	2	....
Phillips, Fogle & Co., Purducker 5	2	....
Gifford & Co., Hummer 1	2	....
Greene County—		
Stanley Clovis & Co., Charles Fordyce 1	¶4½	....
Fox Hill Oil & Gas Co., Hoskinson 3	¶1	....
Carnegie Nat. Gas Co., Henry Bebout 1	¶½	....
P. J. Hamilton & Co., Isaac Kinney 1	*	....
Carneigie Nat. Gas Co., T. F. Rutan 3	125	....
Rutan 5	200	....
Butler County—		
Roxbury & Co., Powell 1	4	....
J. A. Elliott & Co., Worley 4	8	....
Burns & Sherwin, Jack 1	4	....
J. M. McCullough & Son, McCullough 1	3	....
J. D. Berry, Peters 1	*	....
Clarion County—		
Neely—Clover Co., Stewart 4	2	....
S. R. Lewis & Co., Cohlheep 2	¶1	....
Walter & Co., Walbert 1	*	....
South Penn Oil Co., Lot 44, tract 1	*	....

NEW YORK

Company, Well and Location	Initial Production Bbls.	Depth
Allegany County—		
F. C. Shaner & Co., Coast 1	4	....
Dermitt & Gilligan, Dermitt 1	3	....
William Bartoo & Co., Bartoo 1	3	....
Bovaird & Miller, Miller & Co. 1	3	....
N. V. V. Franchot & Co., Fries 1	3	....
Keller & Co., Keller 1	3	....
I. E. LeSeur & Co., LeSeur 1	2	....
Stebbins & Atwood, Heseltine 1	2	....
Reeland & Withey, Withey 1	3	....
F. J. Wilson, Ballard 1	2	....
State Bank of Bolivar, Royce 14	2	....
M. J. Ball & Co., McGuire 1	2	....

WEST VIRGINIA

Company, Well and Location	Initial Production Bbls.	Depth
Ritchie County—		
J. F. Deem & Co., Jacob Tingle 1	¶¼	....
E. L. Frymire & Co., A. C. Wilson 3	¶1	....
Hope Nat. Gas Co., Porter Maxwell 1	¶1	....
C. A. Stanley 1	¶1	....
Swingle & Co., Robert Templeton 1	¶1	....
B. C. Deem & Co., R. P. Swisher 1	*	....
Gilmer County—		
Pittsburg & W. Va. Gas Co., Laveria Davis 1	¶1¼	....
J. R. Lynch 1	¶2	....
Clem Norris & Co., Margaret Barker 1	¶1½	....
Carnegie Nat. Gas Co., Hennon McCarthy 1	¶1½	....
Beson & Co., Riddle Bros. 1	2	....
Marion County—		
Owens Bottle Machine Co., A. N. Amos 1	¶2	....
J. S. Snyder 1	¶1½	....
C. R. Clayton 2	¶2¼	....
Andrew Snyder 1	¶¼	....
O. M. Haught 3	¶2	....
Roane County—		
United Fuel Gas Co., J. S. Keffer 1	¶2	....
William Campbell 2	¶2	....
L. M. Kelly 1	¶2	....
T. G. Jackson 1	¶2	....
Asbury Lewis 1	¶17	....
Wetzel County—		
Manufacturers Light & Heat Co., Hannah Stump 3	¶2	....
G. M. Scott 1	¶1½	....
E. E. Lough 1	¶1½	....
Harrison County—		
Grasseli Chemical Co., John A. Stone 1	¶3	4450
Aizpurin Oil Co., Pat Dolan 1	55	....
Wood County—		
Forest Cline, J. W. Goodwin 1	6	....
C. E. Grow, Tim McAtee 11	5	....
Lincoln County—		
United Fuel Gas Co., Horse Creek Land Co. 6	¶1¼	....
H. H. Dial & Co., J. M. Ferrell 1	¶1	....
Cabell County—		
Harshbarger Oil & Gas Co., E. W. Beckett 1	¶¼	....
Aetna Oil & Gas Co., J. L. Walker 1	¶¼	....
Braxton County—		
Ohio Fuel Oil Co., L. C. Himrick 1	¶2¼	....
Boone County—		
Downing Gas Co., S. E. Hill 1	¶2	....
Lewis County—		
Hope Natural Gas Co., Charles Clark 1	5	....

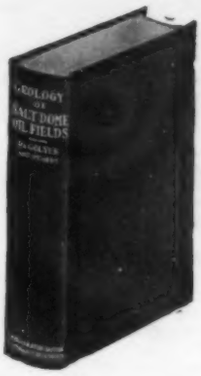
Company, Well and Location	Initial Production Bbls.	Depth
Calhoun County—		
Hope Natural Gas Co., Mary L. Whipkey 1	¶1¼	....
Marshall County—		
Manufacturers Light & Heat Co., James E. Wilson 3	¶2	....
KENTUCKY		
Warren County—		
Wood Oil Co., C. G. Davenport 25	5	445
P. H. Lavelle, W. R. Hunton 9..	*	1051
Allen County—		
Mealy & Mealy, M. J. Lewis 24.	*	380
Owensboro Field—		
J. C. Ellis, Waller 1	250	600
Chrysler & Co., Red Hill School District 1	*	1000
W. A. Probus, C. A. Leeper & Co. 4	40	504
Floyd County—		
Eastern Carbon Black Co., W. P. Leslie 5	¶2½	....
Lawrence-Johnson Counties—		
Swiss Oil Corp., P. Sparks 34....	10	....
Johnson-Magoffin Counties—		
Hartman Oil Co., Pace 2	5	....
Morgan County—		
Popping Creek Oil Co., Elam 2....	3	....
Andy Lick Oil Co., Burchell Heirs 3	¶1	....
John Burns 1	2	....
Barren County—		
Consolidated Oil & Gas Co., H. W. Duff 50	20	....
H. W. Duff 51	20	....
H. W. Duff 52	20	....
H. W. Duff 53	20	....
H. W. Duff 54	20	....
H. W. Duff 55	20	....
H. W. Duff 56	20	....
H. W. Duff 57	50	....
Lakawanna Oil Prod. & Ref. Co., Ish Winniger 2	5	....
SOUTHEASTERN OHIO		
Washington County—		
Charles L. Erb & Co., Harvey Scott 6	¶½	....
J. O. Herlan & Co., Johnstone Holland 2	*	....
J. E. Shankland & Co., James Eddy 5	*	....
Morgan County—		
The Sun Co., Josh L. Longstreth 7	¶¼	....
The Pure Oil Co., Wilbert Bush 6	15	....
Noble County—		
L. A. Patton, George Warren 8..	2	....
NORTHWESTERN OHIO		
Wood County—		
Oko Oil & Gas Co., Gorge Dauer 1	4	1280
Mercer County—		
Samuel W. Tatt, Jr., Joseph Brunswick 2	4	1150
CENTRAL OHIO		
Guernsey County—		
The Logan Gas Co., A. R. Booth 1	¶¼	....
Booth 1	¶3¼	....
Oliver 2	¶5½	....
The Ohio Oil Co., Oliver 1	¶5	....
Oliver 2	¶7	....
Ruby 1	¶2¼	....
Wiscarver 1	¶2½	....
Cambridge Oil & Gas Co., Anker 1..	¶2½	....
Broom 1	¶3	....
The Pure Oil Co., Clark 1	¶2¼	....
Balof & Co., Balof 1	*	....
Dare & Co., Stephens 1	*	....
Blackstone & Co., Broom 1	¶2	....
Wittmer Property Trustee, Morrison 1	¶2½	....
Pollock & Co., Gill 1	2	....
Gill 2	¶1½	....
Ohio Fuel Gas Co., Shriver 1	*	....
McWilliams 1	*	....
Milligan 1	¶3½	....
Anderson 1	¶2	....
Nice 1	¶2¼	....
Hawes 1	¶3	....
Oliver 1	¶2½	....
J. R. Fulton 1	250	....
Simmons L.	30	....
Taylor 1	10	....
Crossley 1	7	....
Hocking County—		
Marlow Oil & Gas Co., J. Everhart 6	5	....
The Pure Oil Co., L. A. Leslie 2.	107	....
The Preston Oil Co., Almeda Linton 1	¶½	....
Jewel Oil Co., N. L. Roby 1	5	....
Bowlby & Co., J. W. Bowlby 1	¶½	....
Bell & Scholl, C. Dawley 1	5	....
Adair & Sterns, L. Donaldson 1..	¶½	....
Kingston Oil Co., A. W. Skinner 1	*	....
Holmes County—		
Klise, Eckstein & McCann Co., J. Beller 1	25	....
The Logan Gas Co., E. B. Weaver 1	¶¼	....
Empire Gas & Fuel Co., L. Donald 2	*	....
The Ohio Oil Co., O. Smitheiser 3	75	....
Kemrow & Co., R. Bricker 1	20	....
Knox County—		
Weideman & Co., Jacob Hays 1..	*	....
Apple & Co., O. M. Larison 1	*	....
Ohio Fuel Gas Co., J. M. Miller 1.	*	....
T. McMahon 1	10	....
Licking County—		
Leonard Oil & Gas Co., M. R. Moran 5	10	....
Ohio Fuel Supply Co., Al. Osborne 1	*	....
Guy Shafer, Joseph Chaney 5	2	....
Athens County—		
The Logan Gas Co., A. M. Mowery 1	¶½	....
Sweeney & Co., M. Rowan 3	¶¾	....
Hendricks & Co., C. Swartz 4	¶½	....
Coshocton County—		
Crawford, Moyer Co., J. Lewis 3..	3	....
The Preston Oil Co., W. S. Cooper 1	*	....
Meigs County—		
Edward Calderwood & Co., D. M. Neese 2	¶1	....
The Pure Oil Co., Minnie Kantz 1	¶2	....
Ashland County—		
The Logan Gas Co., L. S. Siddle 1	¶½	....
Klise, Eckstein & McCann Co., J. A. Spencer 4	*	....
Perry County—		
Leonard Oil & Gas Co., J. H. Briggs 1	50	....
Vinton County—		
Beeghley & Shaffer, W. Dearth 2..	2	....
Medina County—		
The Logan Gas Co., L. Hance 1..	¶1½	....
Cuyahoga County—		
Hulse & Kundtz, N. H. Austin 1..	¶1¼	....
Muskingum County—		
Trimvay Oil & Gas Co., Sam Dorsey 1	¶2	....
INDIANA		
Pike County—		
Henry Skidmore & Co., Walter Miley 3	110	1403
Wiser Oil Co., Ern Wilson 1	5	1416
Noble-Bolyard Oil Co., D. S. Huey 10	5	1282
Sullivan County—		
Hollingsworth & Co., J. F. Harrison 5	*	640
ILLINOIS		
Wabash County—		
Bell Bros., L. Armstrong 1	7	....
Mahutska Oil Co., Madden 6	70	1418
J. S. Young Jr. & Co., C. Keyser 1	60	1457
Armstrong Heirs 1	*	1600
Lawrence County—		
Big Four Oil & Gas Co., Ellen Lutz 2	10	1919
The Ohio Oil Co., J. Petty 4	1	1083
MONTANA		
Kevin-Sunburst—		
Ferdig Oil Co.'s No. 17, SE¼ 29-35-1	45	1445
Adams Oil Co. No. 2, SE¼ 31-35-1	75	1440
"56" Oil Co.'s No. 20, NE¼ 32-35-1	30	1460
Bowbells Oil Co.'s No. 2, NW¼ 33-35-1	135	1465
Dakota-Montana Oil Co.'s No. 18, NW¼ 31-35-1	25	1470
Bottineau-Minot Oil Co.'s No. 2, SW¼ 33-35-1	600	1485
Hill Oil Co.'s No. 2, SE¼ 28-35-2	50	1460
California Co.'s No. 7, SE¼ 22-35-2	15	1475
No. 6, SW¼ 22-35-2	60	1460
Barmac Oil Co.'s No. 5, NW¼ 30-35-1	60	1485
COLORADO		
Moffat—		
Texas Prod. Co.'s No. 2Q, 18-6-86	*	3900
WYOMING		
Mule Creek—		
H. E. Brigg's No. 1, NE¼ 2-39-61	*	310
Salt Creek—		
Continental Oil Co.'s No. 22, SW¼ 32-40-78	50	1750

California

Huntington Beach—		
McKeon Drilling Co.'s Smith 1	693	3933
McKeon Oil Co.'s Huntington 3	850	3994
Placentia-Richfield-Central Oil Co.'s No. 1	500	2865
Petroleum Securities Co.'s Gibson..	*	4126
U. S. Royalties Co.'s Stine 1	500	3875
Baldwin Hills-Inglewood—		
Petroleum Securities Co.'s Rubel 9, wo	1368	2455
Standard Oil Co.'s Baldwin-Cienega 41	400	2100
Torrance-Redondo—		
Chanslor-Canfield-Midway's Del Amo 56	236	3650
Brea-Richfield—		
Shell Co.'s Orange 11	600	5317
Orange 13	330	5094
Chanslor-Canfield-Midway's Bradford 5, wo	175	4750
Standard Oil Co.'s Kraemer 2	295	4660
Union Oil Co.'s Chapman 25, wo..	1150	4613
Seal Beach—		
Marland Oil Co.'s Bixby 4	100	4468
Venutra Avenue—		
Shell Co.'s Gosnell 13	3311	6305
Wheeler Ridge—		
Standard Oil Co.'s well	70	2380
Midway—		
Honolulu Consolidated Oil Co.'s No. 18	50	3345
No. 37	366	3017
No. 87	96	2850
Cat Canyon—		
Marland Oil Co.'s Williams 1	*	4286

Oklahoma

Carter County—		
Magnolia Pet. Co., Newstadt, NWc SW SE 34-1s-3w	40	3376
Wirt Franklin, Corpenter 7, SE NW SW 22-2s-3w	85	2263
Roxana Pet. Corp., Coughman 4, NEc SE 7-2s-2w	133	2735
Wirt Franklin, Calvery 1, NEc SE NW 22-2s-3w	*	4165
Creek County—		
Gypsy Oil Co., Land 5, NWc SW SE NW 1-18-11e	60	2138
Richards 16, NW NE NW 1-18-11e	600	2105
Richards 17, NEc NW SE NW 1-18-11e	700	2076
The Prairie O. & G. Co., McMahon 2, NWc NE NW 10-17-9e	30	2006
Dan Hope 1, NEc SW SW 3-17-9e 50	20	2036
Prod. & Refiners Corp., Henry Hogan 3, NWc SW SW 1-14-8e	5	2465
W. J. Cole, Unallotted 1, SWc NW NE 22-18-11e	¶10	2155
Sunray Oil Corp., Sango 10, NEc SE NW 6-18-12e	100	1993
The Texas Co., Simmons 5, C SW NW SE 3-17-9e	50	2103
Nowata Oil & Refining Co. & Independent, Pemberton 2, NEc NW 8-17-10	50	3081
O. M. Ireland, Smith 1, NWc SE 11-17-10	18	2072
J. H. Wright, Tahkaney 1, C E L NE NW 24-17-10	20	1937
C. G. Tibbins, Unallotted 33, C E L NE SW 3015-9	150	3592
Atlantic Oil Prod. Co., Bear 3, SWc NE NW 16-14-10	490	3239
Devonian Oil Co.'s Miller 5, NEc Miller 6, NEc SW NE 14-19-8	*	2963
T. B. Slick, Jones 1, SEc SW NW 23-16-8	*	3120



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Geology of Salt Dome Oil Fields

A Symposium on
The Origin, Structure, and General Geology of Salt Domes, With Special Reference to Oil Production and Treating Chiefly the Salt Domes of North America

By

E. DeGolyer, W. A. J. M. Van Waterschoot Van der Gracht, Marcus I. Goldman, I. P. Voitesti, S. L. Mason, Hans Stille, Donald C. Barton, Sidney Powers, W. C. Spooner, Dave Donoghue, Francis Edward Vaughan, R. H. Goodrich, Lyman C. Reed, P. K. Kelly, H. E. Minor, Roland B. Paxton, A. S. Henley, John R. Suman, George Sawtelle, George M. Bevier, W. F. Bowman, Alexander Deussen, Laura Lee Lane, D. S. Hager, E. Stiles, Paul L. Applin, William Kennedy, Albert G. Wolf, Ben C. Belt, W. P. Henniger.

EDITED BY RAYMOND C. MOORE

With Assistance of Wallace E. Pratt, Donald C. Barton, Alexander Deussen, J. P. D. Hull

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Company, Well and Location	Initial Production Bbls.	Depth
Wood & Farren, Charsotenne 4, NWc SE 21-17-9	*	3053
W. R. Davis, Sango 1, NEc NW 7 16-9	*	....
Garfield County—		
Sinclair O. & G. Co., Walker 65, C S L NE NE 13-22-4w	575	3695
Kisner 31, SENW 19-22-3w	*	3635
Summers et al, Faramal 1, C E½ NE 13-20-4w	*	2715
Grady County—		
Meridian Gas Co., Dryden 3, C SW SW 2-4n-8w	¶22	2120
Magnolia Pet. Co., Smith 2, C SE NE 11-4n-6w	¶33	2253
Mitchell 3, SEc NE NW 34-3n-5w	45	1379
Carter Oil Co., Cross 1, NEc NE SW 35-3n-5w	24	1472
Hughes County—		
Roxana Pet. Corp., Powell 1, NWc NE 35-9n-9e	400	3361
Independent O. & G. Co., & Margay, Reed 1, SWc NW 28-8n-9e	*	4656
Magnolia Pet. Co., Meadors 1, NWc SW 28-8n-9e	*	3605
McCoy 1, SWc NE 29-6n-9e	*	3598
Comar Oil Co., Buel 5-W, SWc NW NW NE 21-29-1w	2820	3395
Buell 6-W, SWc NW NE 21-29-1w	6265	3371
Priboth 11, NWc NE NW 21-29-1w	3163	3402
Bechtel 2-W, NEc SE SE SW 5-28-1w	205	2815
Marland Oil Co., Arrow 10-A, SEc NW SW NE 17-25-2	20	1559
Barnesdall Oil Corp., Leigerat 2, SW SE NW 28-25-1w	*	4482
Leigerat 3, NEc ST NW 28-25-1w	*	4485
Leigerat 5, SEc SW NW 28-25-1w	*	615
Muskogee County—		
Future Dev. Co., Jefferson 1, SWc NW 33-15-15	250	2088
W. R. Sommerwille, Sango 1, NEc SE NW 17-15-17e	¶5	750
Herbert Oil Co.'s Foreman 1, C W L NE SW 14-13-18e	¶3½	750
Montgomery et al's Grayson 9, SEc 3015-15	*	....
Plymouth Pet. Co., Vanderslice 43, SWc NE NW 32-15-15	*	1820
Okfuskee County—		
Amerada Pet. Corp., Harjo 16, NEc NW NW 13-12-11e	60	2556
Darby Pet. Co., Manwaring 1, C S L N½ SE 17-13-10	*	3506
Okmulgee County—		
Diamond Oil Co., Jones 1, NEc NW NW 27-13-11	400	2529
The Texas Co., Brumer 13, C E L W½ SE SE 16-15-14	20	2377
A. G. Hazelett, Dunbar 1, SWc 30-14-13e	15	2760
Columbus Drilling Co., Doyle 4, C N L SE NW 28-13-14e	20	1930
Baker et al, Lowe 1, NWc SE 26-16-12e	*	2550
Terrian and Balliere, Depreist 2, C S L SE NE 19-15-13e	*	2772
Drew Beams, Doyle 1, NEc SE NE 20-13-14	*	1930
The Prairie O. & G. Co., Wood 1, C SE SW SE 612-12	*	2716
Osage County—		
Phillips Pet. Co., No. 12, SE NE SW 7-27-6e	80	2017
Knupp Oil Co., SW NE NW 2-26-11e	15	866
I. T. I. Oil Co., No. 348, SEc NW NW NW 8-25-11e	¶2	2108
Kewanee O. & G. Co., No. 17, NEc SW NE 5-22-11e	63	1717
Tidal Oil Co., No. 10, C S L SW 1521-12e	18	1335
Barnsdall Oil Corp., No. 18, NEc NW SE 5-20-12e	25	1352
A. G. Oliphant, No. 1, NEc 3229-10	*	....
Pawnee County—		
J. L. Donahue, Brian 1-A, NEc NW NE 27-23-4e	¶13½	3319
Ed. Reese et al, School land 1, NWc SE 16-21-7e	60	2262
Magnolia Pet. Co., Fugate 3, NWc NE SW 9-20-6e	40	3088
Vogler 1, SWc NE 32-20-6e	30	3382
Sinclair O. & G. Co., Mullendore 12, NWc NE 10-20-8e	17	2526
Donahue and Carter Oil Co., Zoldoskie 4, SWc NE SE 22-23-4w	*	....
Payne County—		
Josey Oil Co., Long 5, NWc SW SW 36-19-5e	60	3474
Magnolia Pet. Co., Hughes 1, NEc SW SW 8-19-5e	*	4000
Seminole County—		
The Prairie O. & G. Co., Strother 1, SEc 27-9n-6e	9600	4110
Producers & Refiners Corp., Amos 6, SEc SW SE 318n-8e	240	4009
Magnolia Pet. Co., Lena 1, SW NW SE 109n-5e	192	3537
Ramsey, Salinda 7, SWc NW SE 31-8n-8e	355	4047
T. Atkins et al's Miller 1, NEc NW 9-8n-8e	*	4305
Stephens County—		
Walter Gant, School land 2, NEc 36-1s-9w	25	2213
Beard & Cobb's Skelly-Brigham 3, NWc SW SW 30-1s-8w	75	1990
McMann Oil Co.'s Stevens 11, NWc NE NE NW 33-1s-8w	50	2703
Tulsa County—		
Sapulpa Fuel Oil Co.'s Unallotted 1, SWc 32-19-11e	¶25	1817
W. O. Dickinson et al's Hayden 5, SEc NW 12-16-13e	¶8	1480
Davis & Wallace's Perryman 1, NWc 6-19-10	*	2147
Craig et al's Unallotted 1, NEc SW SW 17-19-10e	*	2102
Wagoner County—		
Thrift et al's Drew 3, SWc NW NW NW 30-18-15e	25	1287
J. Koberling et al's Tucker 3, C E L NE SW 25-17-16e	50	1333
Eastern Okla Oil Co.'s Haynes 1, NEc SW SE SE 12-17-15e	*	1589
W. A. Martin's Bruner 2, NEc SE SW 19-17-16e	*	920
J. W. Hale et al's McIntosh 1, NWc SW 31-16-18e	*	1605
Comanche County—		
Westheimer & Daube's Watson 2, NEc SE NE 24-2n-10w	*	2107
Kingfisher County—		
Hoffman et al's Otis 1, NWc NE 20-15-8w	*	....
Lincoln County—		
The Prairie O. & G. Co.'s Price 1, NEc SE 7-15-6e	*	4117
Independent O. & G. Co. & McCullough's Thompson 1, NEc NW 1-12-5e	*	4667
Logan County—		
Santrock Drlg. Co.'s Mathews 1, SWc NE 11-18-3w	*	....

Kansas

Company, Well and Location	Initial Production Bbls.	Depth
Butler County—		
Empire Gas & Fuel Co.'s Worrell 3, C SW NW SE 12-27-7e	300	2713
Phillips Pet. Co.'s Vore 2, C NE SW SW 12-27-7e	25	2720
Seward 3, C NE NW NW 13-27-7e	150	2709
Empire Gas & Fuel's Love 32, C SE SW SW 20-28-4e	30	2478
Elk County—		
Union Gas Corp.'s Webb 16, NEc SE SE NE 14-31-10e	300	1634
Theta Oil Co.'s Lisco 1, C NW NE NE 34-31-10e	100	2285
Greenwood County—		
Empire Gas & Fuel Co.'s Garth 2, C NE NE NE 22-22-11	145	1908
Skelly Oil Co.'s Teter 8, C SE SW NE 15-23-9e	200	2343
Green 6, C SW SE NE 15-23-9e	150	2348
Manhattan Oil Co. & Phillips' Edwards 2, C SW SE NW 16-23-11e	75	1982
Simons & Amerada Pet. Corp.'s Ellis 4, C NE NW SW 26-23-11e	200	2042
McGinnis et al's Mock 2, C SW NE NE 36-24-10e	200	1897
Mock 3, C NW NE NE 36-24-10e	150	1899
Chambers & Spencer's Evans 1, C NE NW SE 30-23-13e	*	....
Peerless Oil & Ref. Co.'s Cox 1, C SW SW NW 14-25-11e	*	1917
Connell et al's Green 1, C SW NW NE 17-25-12e	*	1842
McPherson County—		
Merriman et al's Anderson 1, C SW 29-18-2w	¶7¾	2945
Russell County—		
Mid-West Refining Co.'s Dortland 36, C SE SE NW 5-14-15w	120	3058
Summer County—		
Roxana Pet. Corp.'s Van Sickle 3, C E L S½ NW SE 25-31-2e	87	1890
Cowley County—		
Lewis et al's Magnus 1, C NE NW SE 31-34-7e	*	....
Marion County—		
Cameron Bros. et al's Colbeck 1, SWc 1-22-3e	*	3024
Reno County—		
Hopper et al's Stevens 1, C NW NW NW 7-26-7w	*	4312
Rice County—		
Stamey et al's Barnes 1, C SE SE NE 21-20-6w	*	3775

Arkansas

Company, Well and Location	Initial Production Bbls.	Depth
Smackover Field, Ouachita County—		
Gulf Ref. Co.'s R. Bennet 6, 33-15-15	*	2695
Little Fay Oil Co.'s Robertson 3, 25-15-16	40	2040
Smackover Field, Union County—		
Keen & Woolf's Murphy 3, 9-16-15	65	2384
Lion O. & R. Co.'s Lawton A-8, 10-16-15	150	2390
Louisiana Oil Ref. Corp.'s Murphy B-1, 9-16-15	¶3	2627
Magnolia Pet. Co.'s Childs 4, 8-16-16	100	2637
Murdock et al's Hayes 4, 4-16-15	125	2350
Vestal 1, 17-16-15	*	2815
Standard Oil Co.'s Hardy Murphy 38, 4-16-15	100	2380
Total, 9 wells	¶3-530	
Lisbon Field, Union County—		
Imperial O. & G. Co.'s Ramsey A-1, 21-17-16	30	2170
Lion O. & R. Co.'s Werner 2, 21-17-16	40	2149
Magnolia Pet. Co.'s Hulsey 7, 20-17-16	30	2200
Hulsey 8, 20-17-16	30	2175
Ohio Oil Co.'s Stock 2, 21-17-16	30	2170
Total, 5 wells	160	

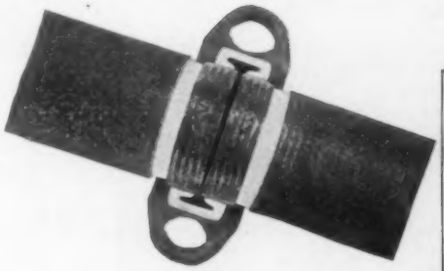
Louisiana

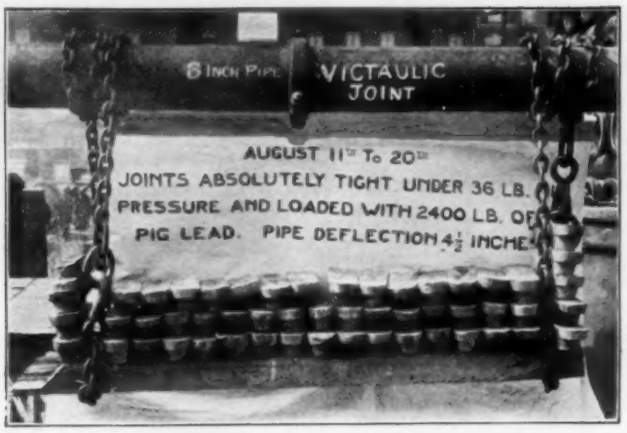
Company, Well and Location	Initial Production Bbls.	Depth
Bellevue Field—		
Autrey Oil Co.'s Snyder 2, 22-19-11	¶2	409
Geo. W. Wetherbee's Fee A-14, 15-19-11	5	435
Fee 13, 23-19-11	*	396
Total, 3 wells	¶2-5	
Caddo Parish—		
Magnolia Pet. Co.'s Wemple 2, 14-20-15	20	2237
Ramsey et al's Powell 1, 36-22-16	10	1050
The Texas Co.'s Curtis 3, 14-20-15	255	2216
Curtis 4, 14-20-15	360	2209
Unity Pet. Co.'s Crystal 1, 13-21-16	3	1055
Crystal 3, 13-21-16	15	1055
Total, 6 wells	663	
Monroe Gas Field—		
United Carbon Co.'s Patton 1, 10-20-4e, Ouachita Parish	*	1685
Urania Field—		
Hartzana Oil Co.'s Urania 2, 7-10-2e	25	1528
Keen & Woolf's Griswold 3, 3-9-1e	*	2000
Louisiana Oil Ref. Corp.'s Tremont B-36, 25-10-1e	100	1569
Total, 3 wells	125	

Texas

ARCHER COUNTY

Company, Well and Location	Initial Production Bbls.	Depth
Atlantic Oil Prod. Co.'s Allen 1	*	1802
Atlantic & Rayzor's Farmer 1	*	1527
Bridwell-Heydrick Oil Co.'s Abercrombie-Taylor 3-B, dd	100	1350
Golding-Cochran et al's Crawford 1	*	1236
Golding-Cochran & Cline's Prideaux 3	30	640
T. F. Hunter et al's Fee 1	100	1644
Marland Oil Co.'s Turbeville 12	150	1517
Marland & Kentucky Oil Corp.'s Fox 1	*	1432
Mid-Kansas O. & G. Co.'s Lowe 3	95	1301
Muse et al's Selman 1	*	1520

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AUGUST 11TH TO 20TH
JOINTS ABSOLUTELY TIGHT UNDER 36 LB.
PRESSURE AND LOADED WITH 2400 LB. OF
PIG LEAD. PIPE DEFLECTION 4½ INCHES

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The yard crane then hooked on to the middle of the pipe and lifted it clear of the supports and dropped it to the ground. Nothing happened to the shock-absorbing Victaulic Joint. At the end of this nine day test, no pressure had been lost.

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Victaulic Joints can be made by unskilled labor in two minutes.

A Victaulic Joint will not go together properly unless the leak-tight ring is correctly centered and the housings are properly adjusted—perfect joints can be easily made in the dark or under water.

Every Victaulic Joint is an expansion joint.

All Victaulic Joints are flexible and permit up to 5 degrees deflection.

In tensile strength Victaulic Joints equal full threaded and screwed joints.

Victaulic Joints are unmatched for resistance to injury by vibration or ground movement—even an earthquake does not bother a shock-absorbing Victaulic Joint.

Repair and maintenance costs are lower with Victaulic Joints because a defective pipe can be removed and replaced without disturbing any other length.

Victaulic Joints are supplied for steel, wrought iron or cast iron pipes, also for hose—sizes from one inch up—for all pressures, low, medium or high.

For detailed information on shock-absorbing, flexible, leak-tight Victaulic Joints, for typical installations and list of uses and users, write for Victaulic Bulletin No. 2.

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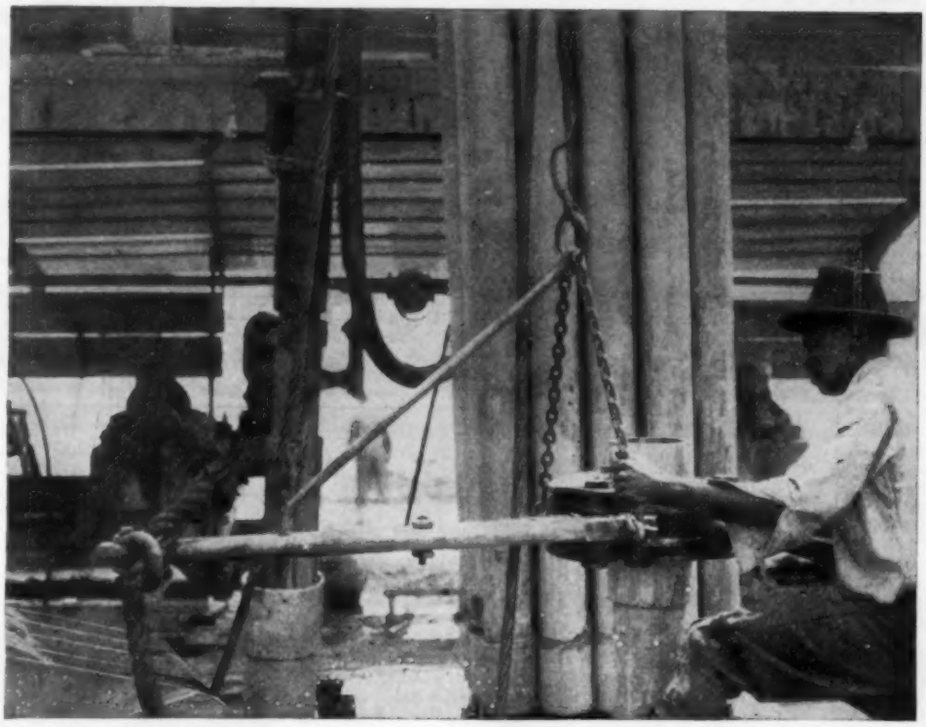
Say you saw it in The OIL WEEKLY

Company, Well and Location	Initial Production Bbls.	Depth
Petroleum Producers Oil Co.'s Turbeville 8	*	1865
Turbeville 9	200	1523
Roxana Pet. Corp.'s Abercrombie-Taylor 9	100	1354
Schermerhorn Oil Co.'s Prideaux 3, Blk. 26	50	644
Simms Oil Co. and L. T. Burns' Turbeville 3-A	350	1501
The Texas Co.'s Turbeville 15-C	130	1523
Turbeville 16-C	100	1525
Turbeville 17-C	*	1652
W. C. Young et al's Ferguson 1	*	1802
BAYLOR COUNTY		
Richards & Pandem Oil Corp.'s Young 1	*	1452
BIG LAKE		
Big Lake Oil Co.'s University 73	†	2510
University 103	75	2451
Texon Oil & Land Co.'s University 7-A	50	2463
BROWN COUNTY		
Amerada Pet. Corp.'s M. E. Fry 3	10	1327
Bradstreet et al's Stout 3	550	1198
Stout 4	80	1193
Cocheko Oil Co.'s Dixon 1	*	400
J. S. Cosden et al's Williams 1-A	*	2399
Curry-Moore et al's Pickett 4	10	1302
Williams 2	50	1240
Gillespie et al's J. P. Newton 4	65	1306
Henshaw et al's Lowe 2	50	1318
Humble O. & R. Co.'s M. E. Fry 5	120	1328
Wooldridge 7	65	1276
Jones & Neiswanger's Taber 1	*	1725
Wm. V. Lester et al's M. E. Fry 10	1200	1309
M. E. Fry 11	300	1322
McLester Oil Co.'s Wooldridge 16	30	1281
Mid-West Exploration Co.'s Suttles 4-A	10	1146
Moore et al's Thigpen 1	*	1410
Prairie O. & G. Co.'s Wooldridge 9	45	1262
The Texas Co.'s Gaines 2	*	1329
Hickman 3	135	1233
Hickman 6	25	1219
West & H-Y Oil Co.'s Newton 20	800	1234
Williamson et al's Keller 8	60	1158
Wooldridge 4	210	1261
Wilson et al's Stone 3	100	1246
BURKBURNETT		
Bridwell-Heydrick Oil Co.'s Ward-Todd 14	*	1125
G. R. Rowe et al's Ward-Todd 1	70	1894
CALLAHAN COUNTY		
Cranfill-Reynolds Oil Co.'s Henderson 8	20	1405
Humble O. & R. Co.'s Irvin 1	*	3432
CARSON COUNTY		
Marland Oil Co.'s Burnett 5-A	¶20	3201
White Deer Oil Co.'s C. R. Garner 1	¶10	3160
COLEMAN COUNTY		
Altitude Oil Co.'s J. C. Dibrell 1	*	2102
Amerada Pet. Corp.'s DeBusk 1	*	1700
Monroe Production Co.'s Harris 1	*	1713
Morris et al's Wallace 1	*	1515
COOKE COUNTY		
American Ref. Co.'s J. A. Dennis 2	40	1287
Sun Oil Co.'s A. Hyman 7	60	1261
Max Westheimer et al's Franklin 1	*	1784
EASTLAND COUNTY		
Bateman-Campbell et al's Motes 1	10	3407
McLester Oil Co.'s Allen 1	*	3188
ELECTRA		
Continental Oil Co.'s Burnett 3-O	*	1638
F. P. Cullum et al's Burnett 1	*	2001
LeBus & Douglas et al's L. P. Douglas 2	15	1028
The Texas Co.'s W. T. Waggoner 315	10	1979
W. T. Waggoner 317	15	548
GRAY COUNTY		
Humble O. & R. Co.'s Merten 1, shot	150	3196
Roxana Pet. Corp.'s Finley 1	85	3019
The Texas Co.'s A. Holmes 1, shot	50	3220
HUTCHINSON COUNTY		
American Ref. Co.'s J. F. Weatherly 3, shot	150	3026
Brookins-Kistler et al's J. A. Whittenburg 1	190	2890
J. A. Whittenburg 2	100	2940
Derby Oil Co. et al's Johnson 4	150	2956
Devonian Oil Co.'s Johnson 5, shot	500	2909
Dixon Creek Oil Co.'s Smith 25	75	2788
Smith 27	30	2960
Empire Gas & Fuel Co.'s J. F. Weatherly 3, shot	120	3020
J. F. Weatherly 9, shot	250	3043
Gulf-Cline & Panhandle Ref. Co.'s Dial 34, shot	160	2826
W. H. Holmes et al's Smith 2, shot	500	2791
Kistler & Lenix's J. A. Whittenburg 1, shot	500	3031
Lucky Ten Oil Co.'s Smith 2	75	2796
Smith 4	125	2810
Marland Oil Co.'s Johnson 1	¶75	3202
Smith-Wright 1, shot	10	2970
J. F. Weatherly 3-A	100	3042
S. D. McIlroy's Smith 4, shot	500	3026
Phillips Pet. Co.'s Johnson-Dorsett 3, shot	350	2718
W. L. Kingsland 2, shot	100	2778
J. A. Whittenburg-Elra 7	100	2928
Prairie O. & G. Co.'s Diana Shaw 2	250	2975
J. A. Swindler & Son's E. Cockrell 1-A	15	3002
JACK COUNTY		
Buttram Pet. Co.'s Sam Cullers 1	80	2094
K-M-A AND IOWA PARK		
Jaffe et al's Mitchell 11	*	1990
Perkins-Cullum & Stump's Chilson 8	15	1192
Simms Oil Co.'s Dutton 8	55	1182
MONTAGUE COUNTY		
Continental Oil Co.'s Bouldin 8-A	35	1143
Howard 12-A	20	1375
Maddox 6-A	50	891
Rowland 19	100	1087
Rowland 12-A	40	970
Rowland 3-C	120	1126
F-H-E Oil Co.'s Howard 4-B	†	1341
Gulf Prod. Co.'s N. J. Howard 6	25	1165
Humble O. & R. Co.'s Rowland 1	25	889
Rowland 1-A	6	890
Olean Pet. Co.'s Maddox 10	60	855
Pure Oil Co.'s W. W. Jones 1-B	*,	2795
The Texas Co.'s Maddox 2-D	70	905
NIGGER CREEK		
Moss-Keeling et al's Rosson 4	15	2958
Pure Oil Co.'s Cogdell 1	110	2840
Transcontinental Oil Co.'s Rosson 16-A	625	2812
SHACKELFORD COUNTY		
Amerada Pet. Corp.'s W. I. Cook 2	¶5-100	1321
Hope Pet. Co.'s Davis 3	20	1449
Reynolds 14	220	1444
Magnolia Pet. Co.'s Eli Meyer 2	*	1555
Milham Corp.'s Moore 1	55	2148
Sedwick 2	25	3552
Roesser-Pendleton Inc.'s W. I. Cook 15-B, Sec. 60	800	1295
Roeser-Pendleton & Marland Oil Co.'s Cook 10-A, Sec. 60	630	1147
W. I. Cook 3-C, Sec. 60	¶8-80	1137
W. I. Cook 2-D, Sec. 60	¶10	1140
W. I. Cook 3-D, Sec. 60	¶12	1123
W. I. Cook 4-D, Sec. 60	¶7	1131
Wentz Oil Corp.'s Proctor 3	*	2201
SOUTH VERNON DISTRICT		
Alford Oil Co.'s Allison 1	*	900
Humble O. & R. Co.'s Bond 16-B	15	2074
W. T. Waggoner 7-M	60	2351
Phillips Pet. Co.'s W. T. Waggoner 12-D	50	1907
W. T. Waggoner 4-L	570	2312
W. T. Waggoner 4-HH	170	2333
W. T. Waggoner 1-JJ	150	2422
W. T. Waggoner 7-NN	165	2297
The Texas Co.'s W. T. Waggoner 305	*	2753
THROCKMORTON COUNTY		
Humble O. & R. Co.'s Richards 1	*	2202
McGuire et al's McKeichen 1	†	849
Reiter-Foster Oil Corp.'s Parrott 2	*	4001
UPTON COUNTY		
Marland Oil Co.'s B. H. Estep 1	50	2396
B. H. Estep 2	15	2366
B. H. Estep 4	*	2378
A. S. Burleson 32	90	2205
Roxana Pet. Corp.'s B. H. Estep 2	255	2337
B. H. Estep 3	80	2363
WHEELER COUNTY		
The Texas Co.'s Noah Smith 1	120	2310
World Oil Co.'s J. H. Jackson 1	1000	2270
YOUNG COUNTY		
Howard Pet. Co.'s Stewart 8	*	603
Kruger et al's Deitrich 1	*	1180
Madden & Hunt et al's Benson 15	*	932
Magnolia Pet. Co.'s I. C. Little 11	115	1282
Roberts Oil Corp. et al's Stewart 11	50	832
Roxana Pet. Corp.'s Hunt 1	*	1250
GULF COAST		
Spindletop—		
Gulf Prod. Co.'s Weed 9	7000	3993
No. 7 Daisy Roche et al	4000	3700
Hines' No. 1 Ewing & Ring	*	4025
Atlantic Oil Prod. Co.'s McLean 10	1500	4008
McLean 12	3000	4100
Yount Lee Oil Co.'s McFaddin 18	2500	2800
Gladys City 10	1728	2608
Batson—		
Pa affine Oil Co.'s Paraffine 68	25	1200
Goose Creek—		
Gulf Prod. Co.'s Rosenthal-Stateland 6, wo	30	3250
Sour Lake—		
Gulf Prod. Co.'s Marrs 1, McLean Fee D	40	3900
C. L. Jackson 4	900	4025
Hull—		
Humble Oil & Ref. Co.'s Hooks-Spell 4, wo	30	3150
Columbia—		
The Texas Co.'s Abrams 12	650	3025
Blue Ridge—		
Gulf Prod. Co.'s L. W. Luscher 9	2000	3800
Texhoma Oil Co.'s Booth 2, wo	*	3250
Pierce Junction		
Gulf Prod. Co.'s W. H. Jones Fee A 1	210	3700
W. H. Jones Fee 1	*	3800
NORTH-CENTRAL TEXAS		
Mexia—		
Lytel et al's Stubenranch 1	180	3150
Nigger Creek—		
Pure Oil Co.'s Atkins 4	180	2835
Trans-Continental Oil Co.'s Rosson A 16	500	2835
Powell—		
Thompson & Upchurch's Woolens 1	*	2975
Carrita Oil & Gas Co.'s Trammel 1	*	3300
SOUTHERN LOUISIANA		
Edgerly—		
Edwards Oil Co.'s Landry 4	10	2780
SOUTHWEST TEXAS		
Duval County—		
O'Hern & Seacord Benavides 3-A sur 174	¶	1478
Jim Hogg County—		
Johnson et al's No. 15, sec 291	75	1281
No. 18, sec 291	100	1287
K. & S. Corp.'s Holbein 49, sec 11, blk 5	350	....
No. 51, sec 11, blk 5	350	....
Kleberg County—		
Humble Oil & Ref. Co.'s Dennett 1-C	175	2280
Medina County—		
Witherspoon Oil Co.'s Adams 2	¶	....
Webb County—		
Wm. Morgan & Associates' Webster 2	¶	2587

W. W. Wilson, vice-president and general manager of the Wilson Oil Tools Corporation and Wilson & Willard Manufacturing Company has left Los Angeles for Tulsa where he will attend the A. P. I. meeting. He is accompanied by Arthur E. Raine, general sales manager. A. C. Elliott, salesman for the tool company in Oklahoma tertory also will be in Tulsa for the A. P. I. meeting.



Wickwire Spencer Rotary Lines

The line that will take the strain in Rotary Drilling HAS—STRENGTH—AND TOUGHNESS—Will Pull the Casing no matter how deep you go. Designed all the way from the ore in one organization.

Mid-Continent Oil Fields

Murray Tool & Supply Co.,
Tulsa-Cleveland, Okla.

Atlas Supply Company,
Best - Fort Worth - Panhandle
Vernon - Breckenridge - Coleman
McCamey - Phillips, Texas

Federal Supply & Machine Co.,
Augusta - Winfield, Kansas

Norvell-Wilder Hardware Co.,
Beaumont - Houston, Texas and
Shreveport, La.

Rocky Mountain Oil Fields

Great Northern Tool & Supply Co.,
Kevin, Montana

Midland Iron Works,
Billings, Montana

Leidecker Tool Company,
Casper, Wyoming

WICKWIRE SPENCER STEEL COMPANY

General Office:
41 EAST FORTY-SECOND STREET, NEW YORK CITY

WICKWIRE SPENCER *PRODUCTS*

WICKWIRE SPENCER STEEL

Say you saw it in The OIL WEEKLY

TEXAS QUARTERLY PRODUCTION

(Continued from page 50)

Name and Address—	Barrels	Value
Navarro Oil Co., Houston	77,903	147,202
Noble Thomas Oil Co., Wichita Falls	6,173	13,273
National Oil Co., San Antonio	1,195	2,163
Noble Oil & Gas Co., Tulsa, Okla.	4,724	11,163
Newblock Oil Co. of Texas, Bristow, Okla.	29,062	45,674
Norman Oil Co., Wichita Falls	3,726	9,739
National Petroleum & Refg. Co., Wichita Falls	2,046	5,533
Nellis, J. A., & Agen Bros., Eastland	253	555
New Domain Oil & Gas Co., Inc., Pittsburgh, Pa.	12,468	22,996
Noack Oil Co., Rockdale	2,040	5,168
Newby Oil Co., Amarillo	2,943	4,412
O'Neil, H. A., Burkburnett	.....	10,977
Omilak Oil Co., Spokane, Wash.	468	840
Offenbacher, Emil, Tulsa, Okla.	381	928
Offenbacher, Emil, Trustee, Tulsa, Okla.	65	155
Ocean Oil & Refining Co., El Paso	1,249	2,247
Old Ocean Oil Co., Kansas City, Mo.,	6,251	9,997
Osage Development Co., Bartlesville, Okla.	2,301	2,877
Oil Investment Co., Wichita Falls	5,668	14,343
O'Neil, John, Wichita Falls	14,576	39,367
Owenwood Oil Corporation, Ft. Worth	3,959	9,093
Overby, W. W., Lease, Wichita Falls	425	1,050
Overby, J. D., Iowa Park	857	2,197
Owenwood Pool No. 3, Ft. Worth	12,659	29,379
Old Colony Oil Co., Dayton	2,863	4,405
Ozark Petroleum Co., San Antonio	423	861
Orange Petroleum Co., Orange	59,942	94,169
Omohundro, W. B., Wichita Falls	2,898	7,808
Owens Oil Co., Brownwood	2,894	5,239
Olney Oil & Refining Co., Olney	592	1,461
Ochiltree-Dunigan Co., Amarillo	42,600	52,577
Oktaha Co. (The), Tulsa, Okla.	1,031	2,639
Olden, Wm. P., Iowa Park	1,682	4,390
Orth, Thomas R. T., Wichita Falls	349	859
Oriental Oil Co., Dallas	2,066	2,066
O'Donohoe-Gates Drilling Co., Wichita Falls	9,774	25,632
Ohio Somerset Oil Co., San Antonio	1,972	2,563
Murchison & Pigg, Vernon	897	2,125
Prescott Pheonix Oil & Gas Co., Muskogee, Okla.	222	530
Pinto Oil Co., Mineral Wells	395	827
Prather, Ed., Special (6-30-26) Houston	218	536
Pace & Ward, Breckenridge	3,032	6,914
Pender Producing Co., Denton	14,099	33,242
Phillips, J. R., Panhandle	3,173	4,226
Primrose Oil Co., Sour Lake	1,236	1,807
Phillips & Currie, 6-30-26, Amarillo	87,398	161,581
Park Fraser & Scott, Wichita Falls	474	1,195
Progress Production Co., Kansas City, Mo.	4,444	11,728
Planet Petroleum Co., Bartlesville, Okla.	45,122	117,597
Prescott Pheonix Oil & Gas Co., Muskogee, Okla.	222	530
Paddock & McRae, Houston	2,662	4,111
Palmer Fredrie Oil Co., Rockdale	231	508
Pattison-Lenix Oil Co., Amarillo	61,271	107,150
Powers Production Co., Houston	4,267	6,969
Powell, J. L., Wichita Falls	425	1,068
Pomona Mutual Oil Syndicate, Pomona, Calif.	6,262	16,828
Palo Duro Oil Co., Amarillo	20,339	33,818
Pivoto, M. E., Sour Lake	5,624	8,680
Paraffine Oil Co., Houston	9,892	15,261
Parry Oil Co., Ft. Worth	1,777	4,307
Pentagon Oil & Gas Co., Ft. Worth	286	689
Pure Oil Co., Chicago, Ill.	1,131,900	2,616,678
Phillips & Currie, Amarillo	96,977	172,731
Philp Bros., Beaumont	2,665	3,650
Pace, Geo. L., Wichita Falls	1,286	3,229
Perkins & Cullum, Wichita Falls	85,555	225,089
Perkins, J. J., Wichita Falls	4,593	12,122
Prairie Oil & Gas Co., Independence, Kans.	449,724	1,109,864
Preston Oil & Gas Co., Brownwood	538	1,218
Petroleum Development Co., New York	811	2,011
Phillips, J. R., Amarillo	1,844	2,583
Phillips, J. R., Trustee, Amarillo	98,702	104,947
Plummer, W. A., Wichita Falls	3,343	7,956
Patterson, W. A., Ft. Worth	1,801	4,855
Producers Supply & Tool Co., Marietta, O.	1,018	2,460
Petroleum Venture Co., Somerset	343	751
Pennok Oil Corporation, Tulsa, Okla.	32,614	69,044
Paggi, Chas. & Co., Beaumont	3,659	5,855
Pandem Oil Corporation, Dallas	115,067	291,986
Phillips-Milam and P. & M. Drilling Co., Chelsea, Okla.	63	167
Phillips & Milam, Chelsea, Okla.	144	353
P. M. Drilling Co.-Ross-Samples & Fraley, Chelsea, Okla.	680	1,829
Paggi Bros. Oil Co., Beaumont	19,860	29,752
Pitzer & West, Breackenridge	24,570	62,900
Pois & Kruger, Trustees, Wichita Falls	9,896	26,622
Pois, M. Trustee, Wichita Falls	380	962
Payne, F. C., et al., Wichita Falls	2,740	7,214
Panhandle Refining Co., Wichita Falls	60,481	152,777
Price, Russell & Co., Ranger	9,781	26,164
Petroleum Producers Co., Wichita Falls	87,509	227,052
Prescott Pheonix Oil & Gas Co., Wichita Falls	1,452	3,412
Production Engineering Corp., Wichita Falls	4,390	11,206
Poor Boy Oil Co., Rockdale	732	1,839
Penn, Robert R., Dallas	735	1,929
Priddy, Walter M., Wichita Falls	11,543	28,975
Petroleum Investment Co., Wichita Falls	7,868	20,543
Phillips Petroleum Co., Bartlesville, Okla.	2,394,473	4,671,933
Prairie Lea Production Co., San Antonio	15,379	19,993
Quincy Oil Co., Electra	149	387
Quakins Petroleum Co., Ranger	6,788	18,098
Reinhart, M. J. Trustee, Oklahoma City	863	2,229
Raney, R. W., Breckenridge	850	1,987
Robinson, O. D., Pittsburgh, Pa.	1,685	3,167
Ramming & Saunders, Wichita Falls	4,985	13,223
Ramming, R. W., Wichita Falls	12	30
Ramming, W. F., Wichita Falls	52	131
Ramming Staley & Ramming, Wichita Falls	1,043	2,700
Ross Amigos Oil Co., Laredo	10,058	12,573
Ross Segunda Oil Co., Laredo	2,174	2,835
Reiter Foster Oil Corporation, Wichita Falls	5,973	15,013
Rowe, M. D., Wichita Falls	1,410	3,630
Reclamation Co., Ft. Worth	12,667	30,795
Roberts, M. C., & Summerfield, G., Dallas	498	583
Robinson, Arthur, D., Dallas	11,586	33,109
Ross, Dwight M., Wichita Falls	1,692	4,460
Republic Production Co., Houston	658,509	1,041,524
Rentex Oil Co., San Antonio	8,505	17,458
Riner & Bailey, Wichita Falls	3,758	9,985
Rubsam & Hunter, Wichita Falls	5,372	13,905
Regna Oil Co., Saratoga	5,724	7,579
Rountree & Simpson, Rockdale	283	717
Rountree, White & Simpson, Rockdale	4,811	12,178
Rountree, Ramsel & Kemp, Rockdale	1,398	3,481
Russell & Wilson, Wichita Falls	263	625
Rowan, A. H., Trustee, Corsicana	1,970	4,358
Roamer Oil Co., Inc., Wichita Falls	1,244	3,081
Rio Grande Petroleum Corp., Houston	5,715	7,143
Russell, Sanderson Oil Co. No. 3, Fort Worth	1,060	2,622
Rio Bravo Oil Co., Houston	1,127,090	1,726,882
Red Bank Oil Co., Tulsa, Okla.	25,723	65,116
Royalty Production Co., Houston	7,743	11,753
Ruby Oil Co., Minerva	486	1,223
Ruthada Oil Co., Ardmore, Okla.	17,442	25,213
Robinson, O. D., Pittsburgh, Pa.	2,164	3,793
Rockdale, Jr., Oil Co., Rockdale	3,141	7,946
Rex Petroleum Corp., Orange	34,461	53,257
Ruff, W. L., Wichita Falls	2,604	6,797
Roxana Petroleum Corp., St. Louis, Mo.	384,961	757,087
Root, C. M., et al, Eastland	3,102	8,672
Rydal Oil Corporation, San Antonio	7,483	9,354
Rydal Oil Corp., Courson-Matches, San Antonio	1,562	1,952
Root, C. M., et al, Eastland	2,791	6,145
Root, C. M., et al, Eastland	3,622	8,626
Root & Rodes, Eastland	5,657	14,051
Root & Rodes, et al, Eastland	46,369	123,323
Raney, R. W., Breckenridge	183	411
Robert Oil Corporation, Breckenridge	32,203	79,268
Ruyle Farm Oil Co., Wichita Falls	10,907	29,719
Ryan Consolidated Petroleum Corp., Bartlesville, Okla.	67,647	174,690
Rycade Oil Corp., Houston	149,463	232,300
Rockwell, J. A., Co., Warren, Penn.	3,815	9,041
Robinson, J. B., Atty., Sour Lake	797	1,222
Ridgeway, G. R., Wichita Falls	1,373	3,353
Red River Oil Co., Tulsa, Okla.	16,749	42,456
Ray & Massie, Wichita Falls	36,817	98,192
Roeser & Pendleton, Ft. Worth	438,109	1,078,283
Ray Featherstone Oil Co., Wichita Falls	3,360	8,778
Rosenberg, Jacob, Tulsa, Okla.	223	541
Rockdale Development Co., Rockdale	1,906	4,671
Rhodes & Highers, Breckenridge	9,486	22,767
Relief Oil Co., Amarillo	56,890	87,118
Schraffner & Wilson et al, Cisco	13,643	36,820
Somerset Oil Co. of Mass., Easthampton, Mass.	44	80
Star Drilling Co., Wichita Falls	8,890	23,871
Sturm, H. L., Ardmore, Okla.	49	89
Etull, R. O., Wichita Falls	15	42
Staley Mashburn Oil Co., Wichita Falls	375	949
St. Louis Oil & Gas Co., Wichita Falls	643	1,579
Stella Oil Co., Beaumont	9,297	12,857
Shackelford Oil Co., Putnam	2,943	6,668
Standard Oil Land & Leasing Co., Electra	326	834
Swicegood, F. L., Trustee, Eastland	333	833
Schaffner, J. F., et al, Cross Plains	61	159
Schaffner, E. N., et al, Cross Plains	405	1,072
Summerfield Oil Co., Tulsa, Okla.	347	905
Speed, C. D., Corsicana	234	573
Sprawls, Harwell & Cook, Abilene	1,180	3,108
Sipe Springs Oil Co., Sipe Springs	28	56
Swanner, John L., Wichita Falls	1,172	2,966
Saratoga Oil Co., Wichita Falls	3,148	8,326
Smith, M. L. C., 6-30-26, Vernon	586	1,342
Smith, M. L. V., Vernon	569	1,303
Southe n Petroleum Co., Houston	4,059	6,181

HOPE
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3 and 4 CYLINDERS — 60 to 250 H.P.

The purchase of a Hope Vertical Gas Engine is a sound investment in a dependable power supply. The greatest values covered by the Hope price do not reveal themselves in any superficial comparisons—they are made manifest in the after years of smooth, trouble-free performance.

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HOPE ENGINEERING & SUPPLY COMPANY
MT. VERNON, OHIO, U.S.A.

ENGINEERS & CONTRACTORS IN NATURAL GAS AND OIL

Name and Address—	Barrels	Value
Superior Oil Co., Superior Wis.	275	675
Sessions, I. P., Rockdale	585	1,435
Sheman Oil & Gas Co., Pittsburgh, Pa.	133	319
Schlicher Oil Co., Beaumont	1,004	1,571
Sinclair Oil & Gas Co., Houston	123,300	198,976
Sindorf & Sindorf, Caddo	1,465	3,333
Strawn Petroleum Co., Denver, Colo.	6,710	17,402
Southwestern Petroleum Co., Tulsa, Okla.	401	913
Sunny Jim Oil Co., Tulsa, Okla.	21,129	34,229
Shaw & Rathke, Wichita Falls	42,686	112,008
Skia-Tex Petroleum Co., Skiatook, Okla.	86,059	150,228
Shaw, Archie, Burett	4,689	9,693
Senter, E. G., Jr., Dallas	375	906
Slick, T. B., et al, Oklahoma City, Okla.	30,897	64,744
Shaw, Fox & Adams, Burkett	3,866	6,956
Southern Exploration Co., Houston	31,475	51,824
Salado Oil Co., San Antonio	2,077	4,423
Sounders, J. R., Wichita Falls	52	131
Staley, J. A., Wichita Falls	4,520	11,797
Sink, Joel, Corsicana	217	453
Shappel Oil Co., Wichita Falls	62,711	165,932
San Bernard Oil Co., Beaumont	3,315	5,112
Shade & Whittaker, Sweetwater	276	722
Schaffner, E. N. et al, Cross Plains	593	1,484
Schaffner, J. F. (6-30-26), Cross Plains	403	1,019
Skinner, E. W., Oil Co., Saratoga	3,871	5,972
Stephens Oil Co., Sour Lake	647	992
Scarbrough, W. A., Burkburnett	2,396	5,996
Swensondale Oil Co., Caddo	14,098	32,735
Stroube & Stroube, Corsicana	94,600	232,191
Stout Petroleum Co., Brownwood	67	137
Snowden & McSweeney Co., New York, N. Y.	52,656	137,076
Southern Exploration Co., Houston	8,376	13,798
St. Marys Oil & Gas Co., St. Marys, W. Va.	16,563	39,624
Summit Oil Corporation, Amarillo	36,260	56,217
Sircovich & Thomas, Houston	1,784	2,951
Spring Creek Oil Co., Amarillo	51,188	87,757
Sun-Burst Oil Co., Amarillo	20,898	30,755
Silurian Oil Co., The, St. Louis, Mo.	4,284	11,207
Smith, E. L. Oil Co., Mexia	69,963	179,000
Sun Oil Co., Dallas	536,783	1,009,268
Simms Oil Co., Dallas	431,588	946,563
Sinclair Oil & Gas Co., Tulsa, Okla.	57,658	144,555
Supreme Oil Co., Orange	8,341	13,152
Stock, H. I., Cisco	5,352	13,999
Smith-Hanlon, Inc., Tulsa, Okla.	3,108	7,745
Schulz & Pois, Wichita Falls	1,270	3,315
Seybert Bros. & Barger, Mooringsport, La.	2,326	5,701
Smith Oil Corporation, Nacogdoches	634	1,737
Smith, J. L., Amarillo	8,074	10,980
Smith & Bynum, Amarillo	23,566	35,579
Strauss-Allen Oil Co., Wichita Falls	8,600	20,788
Sheldon, W. J., Electra	10,313	27,538
Skelly Oil Co., Tulsa, Okla.	371,259	485,662
Shuler-Davies & Co., Brownwood	3,125	6,087
Snider, C. W., Wichita Falls	2,634	7,497
Silk, W. W., Wichita Falls	256	657
Sigler Oil Co., Wichita Falls	2,348	5,190
Shasta Oil Co.-Clifford Mooers et al, Wichita Falls	6,763	16,612
Shamrock Petroleum Co., Wichita Falls	12,191	24,371
Silk, Bullington & Clark, Wichita Falls	3,438	5,737
Somerset Oil Co., San Antonio	1,248	2,370
Superior Oil Producing Co., Lexington, Ky.	3,164	7,955
States Oil Corporation, Eastland	48,507	123,262
South Vernon Oil Co., Vernon	1,274	3,124
Shasta Oil Co. et al, Wichita Falls	6,802	15,568
Stidham & Thrasher, Electra	9,240	23,359
Swastika Petroleum Corp., Wichita, Kansas	1,156	3,108
Stoops, J. P., Ranger	354	784
Schoolfield, R. E., Wichita Falls	203	500
Seaboard Oil & Gas Co. of Texas, Wichita Falls	36,165	94,941
Somerset Crude Oil & Ref. Co., Somerset	4,351	8,970
Shertzer Bros., Dewey, Okla.	15,679	37,563
Staley, J. I. & Co., Wichita Falls	7,578	19,447
Staley, Wynne & Co., Wichita Falls	120,190	150,980
Stovall, E. C., Graham	3,992	9,599
Tolbert, Johnnie Oil Co., Midlothian	2,893	7,821
Trans-Bay Oil Co., Galveston	60	96
Tatum Lease Syndicate, Detroit, Mich.	542	1,122
Texas Petroleum Dev. Co., Cameron	10,141	25,542
Thompson & Cocke, Sherman	1,251	3,355
Thomas, Mack, Wichita Falls	73	162
Trimount Petroleum Co., Shreveport, La.	8,976	21,993
Tidwell, R. V., Trustee, Graham	8,863	21,804
Texota Petroleum Co., Electra	527	1,417
Travis Oil Co., Ft. Worth	345	804
Trinity Production Co., Wichita Falls	735	1,859
Teatsorth, L., et al, Eastland	6,541	17,034
Texas Consolidated Oil Co., San Francisco, Calif.	20,155	52,538
Thaxton, W. H., Estate, Austin	471	1,117
Thompson & McKinnis, Ranger	1,067	2,892
Texas Development Co., et al, Eastland	594	1,082
Thompson, J. L., Trustee, Ranger	4,723	12,885
Triangle Oil & Gas Co., Rockdale	3,561	8,984
Texon Oil & Land Co. of Texas, Big Lake	615	1,470
Tannehill, L. B., Albany	6,086	14,279
The Texas Company, Houston	2,387,272	4,765,184
Tillery, L. J. Oil Co., Inc., Beaumont	10,933	16,342
Texas Pacific Coal & Oil Co., Thurber	195,834	196,172
(Other companies) Texas Pacific Coal & Oil Co., Thurber	125,252	305,143
Triangle Oil Co., Amarillo	120,136	183,900
Thompson Oil Corporation, Ranger	3,929	10,366
Thipplehorn, J. W. and D. R., Ft. Worth	3,871	9,506
Triangle Oil Co., Wichita Falls	807	2,163
Tegler, F. E., San Antonio	408	612
Texas Southern Oil & Dev. Co., San Antonio	2,117	4,426
Taylor Sibley Syndicate, Dallas	2,145	5,594
Texas Producing Co., Coffeyville, Kansas	5,378	13,581
Tholl Oil Co., Beaumont	8,563	21,067
Texas Oil Corporation, Dallas	240	556
Thomson & Morrison, Colorado	2,750	4,538
Tucker & Fox, Dallas	6,672	15,813
Tucker, W. B., Dallas	3,056	7,045
Tidal Oil Co., Tulsa, Okla.	122,527	288,497
Tally, Oscar, Trustee, Burkburnett	391	966
Timblin, W. E., Wichita Falls	187	500
Travelers Oil Co., Amarillo	37,384	66,833
Transcontinental Oil Co., Tulsa, Okla	529,426	1,314,621
Transcontinental Oil Co., Tulsa, Okla.	6,824	16,205
Texas Exploration Co., Houston	9,207	13,811
Tucker & Langford, Wichita Falls	73,021	186,864
The Texas Electric Co., Columbus, Ohio	410	1,092
Texas Fidelity Oil Corp., Louisville, Ky.	12,593	33,701
Texas Plains Syndicate, Chicago, Ill.	751	1,841
Tyson Oil Co., Beaumont	981	1,510
This Oil Co., Sour Lake	1,725	2,583
Tidal Osage Oil Co., Tulsa, Okla.	5,901	14,092
Thomasson, E. M. & Co., Inc., Denver, Colo.	3,074	8,349
Texas Standard Oil Co., Houston	1,825	4,428
Ungren & Frazier, Putnam, (6-20-26)	783	1,611
United Oil & Fuel Co., Philadelphia, Pa.	2,135	3,226
Underwood Drilling Co., Wichita Falls	1,297	3,593
United North & South Oil Co., Luling	171	338
Ungren & Frazier, Putnam	572	1,200
Union Production Co., Inc., Rockdale	5,006	12,766
Unity Oil Co., Beaumont	49,271	67,048
Unice, Chas., J., Houston	1,370	228
Vacuum Oil Co., Houston	28,442	44,582
Val Verde Oil Co., Del Rio	2,629	5,384
Virginia Oil Assn., Ft. Worth	4,431	12,049
Valley Oil Co., Wichita Falls	6,290	16,376
Van Cleave Trust, Baltimore, Md.	1,253	3,228
Webb Oil Co., Humble	4,136	6,380
Wakefield, M. E., et al, Cross Plains	232	406
Wolfe, A. T. & Son, Wichita Falls	362	923
Wooten Reed et al, Graham	1,750	4,208
Weldon Oil Co., Saratoga	9,382	12,082

An "Ideco" derrick that recently went through a fire in the South Mountain Field, Ventura County, California. The fire, caused by the gas igniting in the cellar under the rig, through an unexpected flow of gas and oil, threatened for a while to prove disastrous. It burned for two hours and fifteen minutes before it was put out. The rig survived the fire with only a few girts and braces warped, although at times the heat was so intense that portions of the base of the derrick became red hot. Repairs were quickly made and drilling started again within six days.

NO CUPS
NO PACKING
NO CLOSE FITTING WEARING PARTS
In the New Fluid Packed Pump

The principle of operation of the New FLUID PACKED PUMP is new and revolutionary;—and it is setting new and revolutionary standards in deep well pumping. Enthusiastic reports are reaching us from every part of the country concerning its operation under bad sand, mud and shale conditions. Also, rod breakage is reported at a minimum with this pump.

The standard and traveling tubes have a clearance of 20/1000 of an inch, minimum, admitting a film of fluid which both PACKS and LUBRICATES the space. There is not slippage of the "fluid pack" when the traveling tubes move upward to produce suction in the suction chamber.

Besides eliminating the costly process of recupping and repacking, emulsification has been reduced to a minimum. Due to its loose fit, the FLUID PACKED PUMP easily handles excessive heat conditions. Tubes operate efficiently even with a clearance of 100/1000 of an inch. Scoring does not affect their efficiency.

All field representatives of our company are experienced oil men, and can help you solve your most difficult pumping problems. Let us send one to see you.

Robert N. Atmore Company

913 E. FIRST ST., TULSA, OKLA.

Bristow Healdton Winfield
Smackover Shreveport Casper
Robert J. Miller Co., Houston, Texas

Manufactured by
THE FLUID PACKED PUMP COMPANY
Los Neitos, California

ROBERT N. ATMORE COMPANY
FLUID PACKED PUMPS

Name and Address—	Barrels	Value
Woods, Bennett, Humble	8,190	12,589
Waggoner Refining Co., Electra	17,921	39,396
Watkins, J. A., Wichita Falls	671	1,746
Waggoner Natl. Bank of Vernon, Vernon	2,477	5,972
Watson, M. B., Ft. Worth	1,500	2,400
Weed, Gayle Oil Co., Beaumont	50,252	75,421
Weber, Howard, Bartlesville, Okla.	6,965	16,295
Weber, Howard, Trustee, Bartlesville	483	1,182
Weisman, S., McKinney	21	55
West, J. H., Cisco	6,854	18,281
Wilson Drilling Co., Wichita Falls	12,665	32,046
Witcher & Michel, Wichita Falls	297	780
Witcher, Annie L., Guardian, Wichita Falls	3,537	9,713
White, P. J., et al, Wichita Falls	17,326	47,942
Wichita Production Co., Wichita Falls	13,293	34,694
Wilson Drilling Co., Wichita Falls	5,833	15,224
West Production Co., Houston	10,700	15,708
Wilson-Broach Co., Beaumont	21,356	29,894
Woodburn Oil Corporation, Dallas	13,925	35,571
Worth Oil Co., Wichita Falls	168	354
Westerner-Noble et al, Oklahoma City, Okla.	4,833	12,278
Wheelock & Collins, Corsicana	53,578	131,252
Wood-Benton-Lesh & McCall, Nocona	36,540	64,846
White & Duncan, Wichita Falls	3,631	9,704
Wilcox Oil & Gas Co. of Texas, Tulsa, Okla.	207,706	431,067
Wickett, F. H., Shreveport, La.	2,174	2,718
Wichtex Oil Co., Wichita Falls	743	1,896
Westheimer & Daube, Ardmore, Okla.	1,018	2,352
Wo-Mac Oil Co., Wichita Falls	5,855	15,355
Walker, B. S., Breckenridge	1,647	3,863
Weiler, J. G., et al, Cross Plains	4,089	11,291
White, Jas. H., Wichita Falls	1,783	4,209
Waid, C. A., Cisco	2,636	6,868
White Eagle Oil & Ref. Co., Kansas City, Mo.	156,342	277,666
Weaver & Pois, Wichita Falls	10,149	25,651
Wallace, Dr. Chas. Wm. & Wife, Wichita Falls	45,879	118,280
Why Not Oil Co., Inc., Mexia	12,615	32,741
Western Oil Sales Corp., Wichita Falls	1,202	3,281
Western Oil Corp. of Texas, Wichita Falls	26,172	54,185
Whaley Mineral & Realty Trust, Ft. Worth	5,092	12,885
Westex Oil Co., Amarillo	186,528	306,012
Waggoner, R. M., Special, Wichita Falls	3,761	10,008
Wise & Jackson, Sapulpa, Okla.	4,793	11,794
Whitehill, B. F., Tulsa, Okla.	5,335	14,085
White, C. N., San Antonio	15,425	37,339
Wahpoo Oil Co., Rockdale	1,354	3,522
Witherspoon Oil Co., San Antonio	74,754	173,787
Walker, A. C., et al, Wichita Falls	6,638	16,955
Wood, H. J., Trustee, Cisco	597	1,327
Westex Oil Co., Amarillo	49,933	56,179
Wilson-King, et al, Wichita Falls	17	42
Williams, Burt, Wichita Falls	928	2,144
Wichita Petroleum Co., Tulsa, Okla.	4,201	10,436
Whitman, G. W., Wichita Falls	425	1,072
Ward, Mrs. Fay R., Dallas	136	300
Young, W. C., Wichita Falls	503	1,230
Yount-Lee Oil Co., Beaumont	3,145,052	4,586,904
Yuba Oil Refining Co., Nacogdoches	375	770
Zadie Bell Oil Co., Ft. Worth	792	2,099
SUPPLEMENT		
Putnam Oil Co., Tulsa, Okla.	7,192	17,877
Cisco Oil Co., Tulsa, Okla.	39,410	90,157
Sedwick Oil Co., Tulsa, Okla.	13,095	29,866
Duffy & Goodloe, Abilene	7,843	17,941
Ross & Slicker Oil Co., Ft. Worth	921	2,217
Fisher, Henry J., Newport, N. Y.	3,944	9,940
Caprito & Graham, Breckenridge	653	1,451
Pioneer Oil Gas & Ref. Co., Danville, Ill.	1,587	3,366
Heywood & McSpadden, Amarillo	1,214	1,675
Burkburnett Production Oil Trust, Baltimore, Md.	841	2,221
Burke Burnett, Jr., Oil Co., Ft. Worth	546	1,171
Upham Gas Co. of Texas, Mineral Wells	1,379	4,053
Burkburnett Production & Oil Trust, Baltimore, Md.	841	2,221
Clark & Wilson, Wichita Falls	2,822	6,547
Atkinson & Standefer, Breckenridge	26,258	61,531
Beatty, F. A., Ft. Worth	440	880
Boller, C. W., Wichita Falls	1,629	4,261
Warren-Hayes Oil Co., Cisco	2,276	5,733
Porch-Telshaw & Cady, Houston	2,688	3,746

WILDCATS FROM ALL SECTIONS

Oklahoma Wildcats

CADDO COUNTY—W. J. Hartley's Colbreath 1, SEc NW SE 28-5-12, owd, dr 3300 ft. Abernathy's No. 1, C NE NW 8-5-11, lcn; No. 1, C SW NW 22-5-11, running 10-inch td 1100 ft, dr 1500 ft.

COMANCHE COUNTY—Cherry & Couch's Ritchie 1, NWc SW 19-2-9, sd 1882 ft 1810-20 ft 10 bbls 28 gravity, sd. Mid-Kansas O. & G. Co.'s Cox 1, NEc SE NE 30-1-13, td 1920 ft, sd.

GARFIELD COUUNTY—Haley, Garber & Pulse's Chevekier 1, NWc SW 6-23-4, 6-inch 4236 ft, dr 4360 ft. Sinclair's Fee 1, SWc SW NE 2-20-5, cemt 6-inch 4507 ft, dr plug.

GRANT COUNTY—Ostot Dev. Co.'s Snyder 1, NEc 6-28-4, sand 4328 ft, hfw, td 4330 ft, fsh. Barzell & Moses' Royce 1, SWc NW 34-26-4, sd 550 ft. Dedman, Flennngan & Hennage's Sherran 1, NEc SW 16-26-3, sd 1910 ft.

HUGHES COUNTY—Sand Pet.'s Harnage 1, C SE SE SE 10-8-9, 3372 ft, test 3398 ft b. s. spray 35 bbls, td and test 3410 ft, sd on account of wind. Magnolia Pet. Co.'s Medore 1, NWc SW 28-8-9, 3506 ft, td. Sorry & Swartz's Wallace 1, SEc NW SE 4-8-11, hfw, measured 10-19-26, plugging. Johnson et al's Bear 1, SWc SE NW 32-8-11, test 3855-61 ft, hfw, plugging back to 1575 ft.

KIOWA COUNTY—A. C. Varner's Boham 1, SEc SW NW NW 5-6-19, sd 1127 ft, litigation.

KINGFISHER—Marland Oil Co.'s No. 1, SWc NW 12-18-5, 6-inch at 4186 ft, dr 4415 ft. Pet. Eng. Core Drlg. Co.'s Canfield 1, C NW SE 6-16-7, rig. McKenna & Crawford's Sturgeon 1, NEc SW 27-16-6, repairing rig. Hoffman et al's Otie 1, NWc NE 20-15-8, rig blown down, hole abn. Chicago Oil Co.'s Creaves 1, SWc SE 17-16-6, no report. Reiter & Foster's Davidson 1, SWc 23-15-5, rig.

KAY COUNTY—Tom Palmer et al's Barclay 1, NEc NW 28-26-1, dr 4550 ft, hfw 4560 ft. Ponco Les Oil Co.'s McNeal 1, NE 32-26-2, 2600 ft td, fsh 8-inch cas. Tonkawa Dev. Co.'s McDaniels 1, C SE SE SE 15-25-1, sd 1140 ft.

LOGAN COUNTY—Brayn & Emery's Scott 1, NWc SE 33-19-4, dr 2415 ft. Carter Oil Co.'s Rogers 1, CWc NW 32-19-3, hfw, 4030-40 ft, set 6-inch 4135 ft, dr 4154 ft. Franklin Oil Assn.'s Moore 1, SWc SE 11-18-3, sd. Haley & Pioneer's Quair 1, SWc SE 11-18-3, td 1900 ft rig blown down. Zingery et al's Baker 1, NWc NE NE 5-17-1, 8inch- at 3500 ft, sd 3690 ft. T. B. Slick's Berry 1, SWc SE 28-17-1, dr 3213 ft, hfw. Blackford O. & G. Co.'s Liar 1, C SL N½ SE 28-16-1, sd 1675 ft, litigation.

PAYNE COUNTY—Twin State Oil Co.'s Tibler 1, NEc NW NE 23-18-1, dr 1752 ft.

LOVE COUNTY—Schermerhorn-Ardmore's Dillard 1, SEc NE NW 25-6-3, dr 4288 ft.

NOBLE COUNTY—Geo. Miller's 101 Ranch 1, NEc 1-24-1, td 4300 ft dr.

OKFUSKEE COUNTY—T. A. Johnson's Leedy 1, NEc SE SE 25-12-9, dr 2200 ft. J. M. Kessle's Scott 1, SWc 8-12-11, dr 2210 ft.

POTTAWATOMIE COUNTY—Shaffer et al's Ives 1, NWc SE SE 12-10-3, sd 3620 ft. McCullough's Madgett 1, NWc 25-10-4, sd 4560 ft. Tidal Osage's Kenyon 1, SWc ST SE 3-8-4, dr 4207 ft. Davis Detrick's McCathy 1, SEc NW 10-6-3, dr 4670 ft. Magnolia's Fyke 1, NWc NW 20-7-5, 3965 ft co.

SEMINOLE COUNTY—Superior Oil Co.'s Noble 1, SEc SW SE 10-9-6, dr 3153 ft. Pure Oil Co.'s Josh 1, C E L NW NE 15-9-7, td 2952 ft fsh. Champlin & Base's Sewell 1, NE SE SW 15-8-8, dr 3090 ft. Magnolia Pet.'s Strother 1, SEc NW 17-8-6, dr 450 ft. Empire G. & F. Co.'s Like 1, SWc SW 3-7-6, 3657-63 ft, sand, oil and water, co. I. T. I. O. Co.'s Litke 1, C NE NE 9-7-6, sd 2781 ft. Magnolia's Janekeon 1, SWc NE 22-7-7, dr 3335 ft.

TEXAS COUNTY—Valeriur O. & G. Co.'s No. 2, SEc SE 32-5-12, dr 3300 ft. H. F. Wilcox's Hovery SEc SE 21-4-14, sd lime 4012 ft. Haley, Garber & Pulse's Ellison 1, NWc SE SE 4-1-12, show oil 2705 ft, ur 8-inch cas. Reiter-Foster's Kugle 1, C NE 10-2-11, 2 million ft gas 2707-17 ft, rig rebuilt, td 3489 ft. Connell et al's Tansey 1, SEc NW 5-1-19, spd 60 ft and sd.

Kansas Wildcats

COMPLETION

Russell County—
Mid-West's Dortland 1, SE SE NW 5-12-5 . . . . . 120 3112

DRILLING REPORT

BARBER COUNTY—Skelly et al's Richardson 1, SWc 30-30-14, sd 4680 ft. Vickers Pet. Co. et al's Ott 1, SWc 30-32-14, sd 4487 ft. Shaffer O. & G. Co.'s Alexander 1, C SE 13-33-13, dr 4150 ft.

BARTON COUNTY—Huffin et al's Smith 1, NE SE NE 17-19-10, sd 5120 ft.

COWLEY COUNTY—Branson et al's White 1, SEc SW SW 7-30-6, co 1565 ft.

KINGMAN COUNTY—Phillips Pet. Co.'s Hempell 1, C SE 9-27-6, dr 4135 ft. Harwood & Winters' Lindholm 1, C NE 22-28-5, ur 4026 ft. Crawford and McKenna's Meshere 1, NEc NW 30-28-5, dr 4384 ft. Marland Oil Co.'s Padgett 1, NEc SW 11-28-6, cement 3876 ft. Fleeger et al's Greenleaf 1, NEc 13-28-7, co 4010 ft. Ozark Drilling Co.'s Richards 1, SEc NE SW 4-30-6, sd 4252 ft. Vickers & Stearns' Keimig 1, C NW 35-30-9, dr 3770 ft.

LYON COUNTY—Culp et al's No. 1, SWc SE 25-19-10, sd 220 ft. Gashe & Balliere's Scott 1, NWc 32-20-13, machine.

RENO COUNTY—Sheldon et al's Manigson 1, SEc NW 10-23-4, sd 3330 ft. Fleeger et al's Neeley 1, SEc NW 35-23-7, dr 3260 ft. Frank Hopper's Stevens 1, C NW NW NW 7-26-7, dry and abn 3120 ft.

RILEY COUNTY—Pawnee Oil & Gas Co.'s Marks 1, SWc NE NW 26-10-6, no report.

RUSSELL COUNTY—Mid-West's Dortland 1, SE SE NW 5-12-5, td 3112 ft, 120 bbls 38 gravity. Keys Pet. Co.'s Sloan 1, C SE SW SE 2-13-15, cementing 2650 ft. Wilcox Russell's Wilson 1, C SE SW 14-12-13, dr 3275 ft.

SUMMER COUNTY—Stalling et al's Rice 1, C NE NE NW 3-32-2, sd 3812 ft.

SWARD COUNTY—Wilson et al's Son 1, C NE NE NE 14-33-33, lost hole 600 ft.

ANY sportsman will tell you there are certain guns which shoot harder and straighter than other guns using the same ammunition. There are sound reasons—but who cares for the reasons if the results are there?

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Rocky Mountain Wildcats

WYOMING

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Associated Oil Co.'s No. 1 Glendo	*	1305

DRILLING REPORT

Criterion Oil Co.'s No. 1, Douglas, NE¼ 5-31-70, dr 3112 ft. California Co.'s No. 2, Garland, NE¼ 15-55-97, dr 2530 ft. Associated Oil Co.'s No. 1, Glendo, NW¼ 20-29-68, abn 1305 ft. Bridger Oil Co.'s No. 1, Sage Creek, SE¼ 21-1-1, sd 2000 ft. Allen Oil Co.'s No. 1, Garland, SE¼ 10-56-98, sd 2525 ft. Foreman Oil Co.'s No. 1, Rawhide, NW¼ 24-26-62, dr 5506 ft with rotary outfit. Carter Oil Co.'s No. 2, Billy Creek, SE¼ 17-48-82, ur 4100 ft; No. 1, Horse Creek, NW¼ 35-17-70, dr 3050 ft; No. 1, Nowood, 1W¼ 5-48-90, dr dr 1335 ft. Midwest Refining Co.'s No. 6, Dutton Creek, 1-18-78, dr 5025 ft; No. 1, La Barge, SE¼ 21-27-113, dr 960 ft. Pilot Butte Oil & Gas Co.'s No. 1, Pilot Butte, NW¼ 27-3-1, sdtr 1900 ft. Texas Production Co.'s No. 6, Maverick Springs, 26-6-101, dr 1500 ft. Producers & Refiners Corp.'s No. 5, Big Sand Draw, 10-32-95, co 3330 ft; Baxter Basin, 11-19-104, dr 2920; No. 1, Medicine Bow, 25-21-79, spd; No. 2, Garland, 24-56-89, fsh 2640 ft; No. 2, Clay Basin, 22-3-24, ur 5400 ft; No. 1, Murphy dome, 8-43-91, dr 2600 ft; No. 1, Parco, 2-21-86, dr 1375 ft; No. 2, Eight Mile Lake, 35-20-88, co 4000 ft; No. 19, Ferris, 25-26-87, dr 660 ft; No. 9, Ferris, 11-26-90, ur 1100 ft. Union Oil Co. of California's No. 1, Park County, 9-46-101, dr 2520 ft; No. 1B, Black Mountain, 28-43-91, dr 2450 ft; No. 1A, Black Mountain, NW¼ 34-43-91, co 1800 ft; No. 1C, Fremont County, NE¼ 15-5-1, dr 2040 ft; No. 1G, Fremont County, SE¼ 27-1-1, dr 802 ft; No. 14, Maverick Springs, SE¼ 15-6-2, dr 1326 ft. Ohio Oil Co.'s No. 2, Byron, 33-56-97, co 1850 ft; No. 3, Hidden dome, 31-48-90, dr 2800 ft. Platte River Drilling Association's No. 1, Guernsey, NW¼ 12-26-67, sdtr 3175 ft.

COLORADO

Northeastern Colorado Oil Co.'s No. 1, Logan County, 36-8-55, dr 335 ft. Moffat Petroleum Co.'s No. 1, Moffat County, 13-4-92, dr 3414 ft. Erdman Drilling & Producing Co.'s No. 1, La Plata County, 23-33-12, 1000 ft oil in hole, td 3500 ft. Gypsy Oil Co.'s No. 1, Garfield County, 5-8-102, fsh 3765 ft. Mutual Oil & Development Co.'s No. 1, Fremont County, 34-17-70, dr 2910 ft. Tidewater-Associated Oil Co.'s No. 1, Rio Blanco County, 24-2-103, dr 3015 ft. E. J. Miley's No. 1, La Plata County, 32-33-12, dr 1820 ft. Midwest Refining Co.'s No. 2, Rio Blanco County, 30-2-102, co 2900 ft. General Petroleum Corp.'s No. 1, Montrose County, 35-48-19, dr 3165 ft; No. 1, Montrose County, 4-47-16, dr 4116 ft; No. 1W, Montrose County, 6-47-18, lcn. Columbia Heights Oil Co.'s No. 1, Pueblo County, 10-21-65, dr 1050 ft. Texas Production Co.'s No. 1, Rio Blanco County, 27-3-94, running 6⅝-inch cas, td 2375 ft; No. 2, Rio Blanco County, 31-2-102, dr 2323 ft. Elkhead Development Co.'s No. 1, Routt County, 4-7-86, dr, td not given. Marland Oil Co.'s No. 1, Moffat County, 34-4-92, dr 3250 ft; No. 1, Moffatt County, 16-3-91, dr 2011 ft.

NEW MEXICO

Colorado Gas & Fuel Co.'s No. 1, Chaves County, 16-8-27, dr 5050 ft. Sun Oil Co.'s No. 1, Eddy County, 21-25-30, dr 3800 ft. Union Oil & Mining Co.'s No. 2, San Juan County, 8-29-9, sd 3028 ft. Hub Oil Co.'s No. 1, Valencia County, 13-6-2, dr 3344 ft. Maljamar Oil & Gas Co.'s No. 1S, Lea County, 16-17-32, dr 2765 ft; No. 1GM, Lea County, 5-17-32, dr 2026 ft. Buffalo-Roswell Oil & Gas Co.'s No. 1, Chaves County, 25-11-27, dr 3844 ft. Congress Oil Co.'s No. 1, San Juan County, 34-29-11, fsh 1675 ft. Capitan Oil Co.'s No. 1, Roosevelt County, 4-18-30, dr 3550 ft. Pittsburgh Oil Development Co.'s No. 1, McKinley County, 30-20-10, sd 2100 ft. Ross-Bloomfield Royalty Co.'s No. 1, San Jaun County, 11-29-11, dr 2640 ft. Sun State Petroleum Co.'s No. 1, Union County, 14-24-30, sd 2600 ft. Federal Drilling Synd.'s No. 1, Rio Arriba County, 7-29-7, dr 200 ft.

UTAH

Western States Development Co.'s No. 2, Gibson dome, 12-30-20, sd 495 ft; No. 1, Crescent dome, 4-28-18, sd 1410 ft. Boulder Knoll Oil & Gas Co.'s No. 1, Boulder Knoll, 17-34-24, dr 1230 ft. Empire Petroleum Co.'s No. 1, Moab dome, 20-25-21, lcn. Empire Gas & Fuel Co.'s No. 1, Gibson dome, 6-30-21, dr 510 ft. Embar Oil Co.'s No. 1, Moab, 8-26-22, co, td not given.

Northern California Wildcats

COMPLETION

Company, Well and Location	Initial Production Bbls.	Depth
Gould Hills—		
Myrtle F Oil Co.'s No. 1	30	915

DRILLING REPORT

KERN COUNTY

ANTELOPE PLAINS—W. H. Davis' No. 1, dr 1390 ft.

BUTTONWILLOW — Milham Exploration Co.'s No. 1, cleaning up to start new well.

DEVILS DEN—Devils Den Prod. Co.'s No. 5, dr 875 ft. Luis Lucier's No. 1, dr out cemt 1495 ft. Marathon Oil Co.'s No. 1, fsh 4390 ft. Robins Oil Co.'s No. 1, dr 2150 ft.

FAMOSA—Woodward-Sheedy's No. 1, preparing to resume operations 3502 ft.

GOULD HILLS—Rhoads Oil Co.'s No. 1, dr 1009 ft. L. E. Westrich's No. 1, dr 800 ft. Mendocino-Midway's No. 1, dr 2426 ft.

SHALE HILLS — Huntington-Hawthorne's No. 1, rig.

TEMBLOR HILLS—Fortuna Oil Co.'s No. 1, dr 2070 ft.

WASCO—Main Oil Co.'s No. 1, fsh 5304 ft. No. 2, sd 5276 ft.

EASTERN KERN COUNTY—Crusaders Oil Co.'s No. 1, fsh 2282 ft. Bruce-Mackey Co.'s No. 1, dr 891 tf.

McKITTRICK—Abbott Pet. Co.'s No. 1, dr 1485 ft. Lacy-Esper Pet. Co.'s No. 1, sd 3275 ft. Ridge Oil Co.'s No. 1, dr 3075 ft.

SUNSET—Fresno-Sunmaid's No. 1, sd 4200 ft. Gore Oil Co.'s No. 1, sd 2100 ft. Shell Co.'s No. 1, fsh 4286 ft.

FRESNO COUNTY

CLOVIS — Fresno-Madera Co.'s No. 1, sd 3760 ft. W. W. Taylor's No. 1, dr 1670 ft.

HURON DISTRICT—Associated Oil Co.'s No. 2, fsh 2080 ft.

KERMAN — Associated Oil Co.'s No. 2, bldg rig.

WARTHAM—Bald Mountain Drilling Co.'s No. 1, dr 905 ft.

KING COUNTY

KETTLEMAN HILLS — Bolsa Chica Oil Co.'s No. 1, sd cemt 2360 ft. Louis D. Fay's No. 1, sd 310 ft. General Pet.'s Burbank 1, foundation for rig in. Marland Oil Co.'s Elliott 1, dr 4870 ft. Hugh McPhail's No. 1, bailing 1972 ft. South Coalinga Co.'s No. 1, dr 1555 ft.

VENTURA COUNTY

CAMARILLO—Standard Oil Co.'s Camarillo 1, dr 3980 ft.

CASITAS-OJAI — Miley Exploration Co.'s Casitas 2, rigging rotary 623 ft.

HOPPER CANYON — Bishop-Buckeye Union's No. 2, sd. Henderson Pet. Co.'s Z27, installing electric motor 1300 ft. Hopper Canyon Oil Co.'s No. 1, sd 5000 ft.

MOORPOOR PARK-SIMI — E. A. Parkford's Lloyd 1, dr 1326 ft. Shell Co.'s Perlywood 1, fsh 6667 ft.

MONTALVO—Standard Oil Co.'s Montalvo 1, dr 650 ft.

RINCON—Montecito Oil Producers' No. 1, trying to locate water 3200 ft.

WHEELER CANYON—Wheeler Canyon Oil Co.'s No. 1, sd 4520 ft.

SESPE-FILLMORE — Gillette-Howard's Grant 1, trying to plug 2900 ft. Sespe Oil Co.'s Smith 2, sd 4003 ft. Sentinel Oil Co.'s Flats 1, sd 540 ft.

VENTURA DISTRICT—Associated Oil Co.'s V. L. & W. 1, dr 5076 ft. Chanslor-Canfield's Hobson 1, re-dr 5010 ft. Milam Exploration Co.'s Sexton 1, dr 6466 ft. Rio Grande Oil Co.'s Canet 1, dr 3618 ft. Star Pet. Co.'s Canet 1, dr 550 ft.

SANTA BARBARA COUNTY—Channel Oil & Dev. Co.'s No. 1, refinancing 4820 ft. Hollywood Oil Corp.'s Sudden 1, dr 915 ft. Miley Exploration Co.'s Goleta 1, cemt 660 ft. Summerland Oil Co.'s Becker 1, testing 2500 ft. Standard Oil Co.'s P. U. 1, dr 4500 ft. Queen Oil Co.'s No. 1, rig. West Penn Prod Co's No 2, rigging

SAN LUIS OBISPO COUNTY — Arroyo Grande Pet Co.'s No. 1, dr 3960 ft. Barneyberg Oil Corp.'s No. 1, may abn 1400 ft. L. R. Klatt's No. 1, dr 1400 ft. Painted Hills Oil Co.'s No. 1, rigging up. Paso Robles Oil Co.'s No. 1, dr 890 ft. Shandon Oil Co.'s No. 1, fsh 3010 ft. Walklin Pet. Co.'s No. 1, fsh 2450 ft.

MONTEREY COUNTY — Harriman-Jones Oil Co.'s No. 1, re-organizing. Hennigan-Schwennigan's No. 1, dr 3715 ft. Pan-American's White 1, dr 2865 ft. Petroleum Securities' No. 1, surveying lcn. Pyramid Oil Producers' No. 1, dr 3110 ft.

TULARE COUNTY—Ducor Drilling Co.'s No. 1, dr 4161 ft. Josephine E. Neame's No. 1, fsh 2026 ft. Federal Exploration Co.'s No. 1, dr 4220 ft. Martin Pet. Co.'s No. 1, sd 1670 ft. Ozena Oil Co.'s No. 1, dr 869 ft. Wm. C. Resser's No. 1, dr 1250 ft.

SONOMA COUNTY—Shell Co.'s Murphy 1, dr 3280 ft.

COLOUSA COUNTY—Continental Oil Co.'s Keoughan's No. 1, dr 3010 ft.

Southern California Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Imperial County—		
Diamond Bar Imperial Oil Co.'s 1	*	3700

ALAMITOS HEIGHTS—Pan American Pet. Co.'s Naples 1, dr 900 ft.

ATHENS-WEST—Julian Pet. Corp.'s Mosier 1, dr 3955 ft.

BANDINI—Pan American Pet. Co.'s Bandini 1, dr 3100 ft.

BELLFLOWER—Calpetro Prodcers Synd.'s No. 1, sd 4420 ft; No. 2, sd 4774 ft.

BURBANK—Jefferies-Overton's No. 2, sd 1300 ft.

BIXBY HILLS—National Security Co.'s Orange 1, sd 5151 ft. Orange Co. Pet. Co.'s No. 1, sd 2820 ft.

CLEARWATER—Clearwater Pet. Corp.'s Blinn 1A, sd.

CLAREMONT—Claremont Oil & Gas Co.'s No. 1, reaming 1090 ft.

DOMINGUEZ—Dominguez Extension's R. & B 1, changing drill pipe 3350 ft.

EAGLE ROCK—Calwin Oil Co.'s No. 1, dr 6099 ft.

EL SEGUNDO—Southern California Drllg. Co.'s Matteson 1, dr 3125 ft.

HAWTHORNE—Winwell Oil Co.'s Dome 1, preparing to re-dr 5580 ft.

IRVINE—Calny Oil Co.'s Irvine 1, sd 4247 ft.

LAWNDALE—Smith Bros. Pet. Co.'s Johnson, dr 5500 ft.

LANCASTER — Rudd-Assmussen's No. 1, susp 1860 ft.

LONG BEACH-WEST—Miller-Haley's Extension 1, sd cmt 4865 ft.

MANHATTAN BEACH—Manhattan-Pacific Oil Co.'s No. 1, sd 4409 ft.

MAYWOOD—Magnolia Pet. Synd.'s No. 1, sd 4452 ft.

NEWHALL-SAUGUS—Geo.. W. Johnson's Wickham 1, ready to spd. W. W. Stabler's Castaic 1, dr 3055 ft. Temple-Lefevre's Castaic 1, sd 2107 ft. Union Oil Co.'s Saugus 1, dr 4900 ft.

PACOIMA—W. O. Brubaker's Fernando 1, sd 2698 ft.

PLAYA DEL REY—Milham Exploration Co.'s No. 2, sdt 5713 ft.

RESEDA—Petroleum Securities' Sesnon 1, dr 5000 ft.

SPADRA—Spadra Oil Co.'s Northey 1, cmt plg 490 ft.

SAN FERNANDO—Standard Oil Co.'s University 1, dr 4989 ft.

SAN JOSE HILLS—Bardeen Oil Co.'s No.

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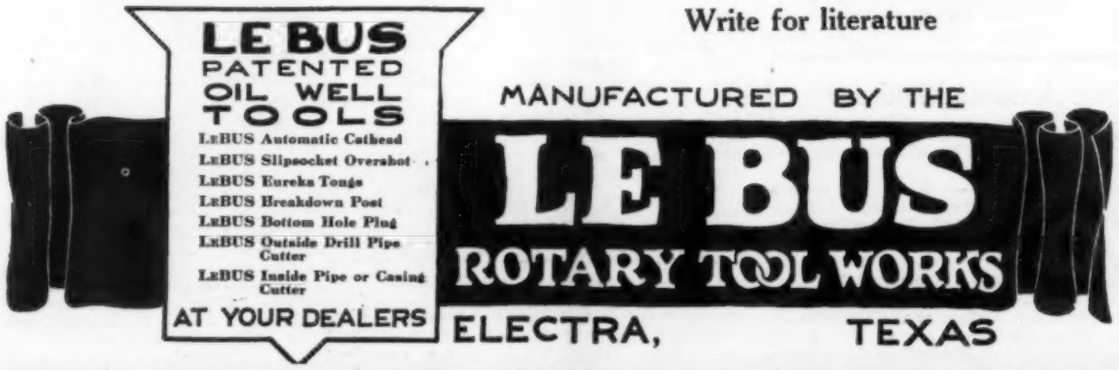

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LE BUS ROTARY TOOL WORKS

ELECTRA, TEXAS

3, sd 1938 ft. D. & B. Oil Co.'s Amar 1, dr 3336 ft.

SAN JUAN CAPISTRANO—California Pet. Dev. Co.'s Spitz 1, co 2889 ft. A & P & K's No. 1, co 2135 ft.

SUNSET BEACH—General Pet. Corp.'s Lomita 1, bldg steel rig.

TELTGRAPH CANYON—Quadra Pet. Co.'s M. J. & M. 1, sd 4123 ft.

TOPANGO CANYON—Standard Oil Co.'s Austin 1, setting 9-inch strong 1760 ft.

VAN NUYS—Van Nuys Community Oil Co.'s No. 1, sd 3860 ft.

RIVERSIDE COUNTY—Trabuco Oil Co.'s well, dr 1825 ft. Banning Oil Co.'s No. 1, sd 974 ft. Corona Oil & Gas Test's No. 1, sd 1550 ft. Spindletop Oil Synd.'s No. 1, sd 2590 ft.

SAN BERNARDINO COUNTY—Arrowhead Dev. Co.'s No. 1, sd 1600 ft. Burgess-Goodale Riggins' No. 1, sd 4110 ft. Como Oil Co.'s No. 1, sd 1380 ft. Colton Terrace Oil Co.'s No. 1, dr 1138 ft. H. & P. Oil Co.'s No. 1, sd 2030 ft. Del Rosa Oil Co.'s No. 1, sd 2460 ft. Hesperia Oil & Gas Co.'s No. 1, dr 3325 ft. Mahala Oil & Gas Co.'s No. 2, sd 5080 ft. Victor Valley Landowners' No. 1, sd 1740 ft. Wade-Bourne-Aldhal's Shoe 1, dr 640 ft. Western Pacific Oil Co.'s No. 3, dr 2080 ft.

SAN DIEGO COUNTY—Cardiff Oil Corp.'s Turner 1, cmt 1284 ft. Oceanside Oil Co.'s No. 1, co 3126 ft. Torrey Pines Oil Co.'s No. 1, rigged. Mission Valley Oil Enterprise's No. 1, sd 5385 ft.

Coastal Wildcats

BRAZORIA COUNTY — Gulf Prod. Co.'s Perry 1, Stratton Ridge, dr 3310 ft in gumbo. Roxana Pet. Corp.'s Pabst 2-A, Clemens dome, dr 1053 ft in sand and shale; Clemens dome, lcn; Clemens 3, Clemens dome, sd 3079 ft in oil sand; Allen Bernard River 1, Allen dome, dr 3036 ft; Allen 3, Allen Dome, dr 4056 ft in sand and boulders.

CHAMBERS COUNTY — Patillo Higgins' Fee 1, Barbers Hill, bailed salt water 1128 ft, packing off to test again. Osage Oil Co.'s State 1, Lake Charlotte, dr 4420 ft in gumbo.

FORT BEND COUNTY—The Texas Co.'s Farmer 1, Boling, dr 4952 ft in sandy shale. Vacuum Oil Co.'s Owens 1, Boling, oil show in cap rock at 600 ft, wt on cement to set. Sun Co.'s Farmer 2, Boling, dr 118 ft in gravel.

GOLIAD COUNTY—Houston Oil Co.'s Pettus 2, Goliad, sd in gas sand 3171 ft; Parks 2, Goliad, rigged up, sd.

HARRIS COUNTY—Mike Katter's Crews 1, 5 miles W of Humble, sd 2435 ft.

JACKSON COUNTY—L. E. Norton's Fenner 1, C. O. Fenner 676-acre tract, sd 3012 ft.

JEFFERSON COUNTY—Gulf Prod. Co.'s Bordages 2, Fannette, swabbing some oil 4993 ft; Thomas 9, Fannette, fsh 4180 ft. Port Arthur Dev. Co.'s West 4, Westbury, flowing salt water 1846 ft. New Beaumont Oil Co.'s Garrick 1, N of Spindle Top, sd 3606 ft in gumbo. Rio Bravo Oil Co.'s T. & N. O. 100, NW of Spindle Top, dr 1719 ft in gumbo. Brooks Supply Co.'s Young 1, 5 miles S of Spindle Top, sd 2575 ft.

LIBERTY COUNTY—Sun Oil Co.'s Chambers 1, Moss Bluff, dr 2472 ft in shale.

WHARTON COUNTY — Rich-Humphrey's' Malone 1, 5 miles W of Wharton, changing rig, td 2008 ft. The Texas Co.'s Taylor 11, Boling, dr 2433 ft in gumbo.

San Antonio Wildcats

ATASCORA COUNTY—Witherspoon's Oil Co.'s No. 1 English.

BEXAR COUNTY — B. F. Thompson's Weites 1, topped the Edwards lime at 1626 ft.

BASTROP COUNTY—W. L. McClanahan's Sodrok 1, dr. John Storey's No. 1, dr below 1880 ft.

DUVAL COUNTY — Associated Oil Co.'s Sutherland 1, dr. Barkley-Meadows-Morgan's King Harper 3, dr. Buffum et al's Mesquite 38, set cas; Benavides 1, set cas at 1709 ft, dr sand at 1712 ft. Gulf Production Co.'s Brambert 1, survey 8, dr. Humble Oil Co.'s Dowdy 1, dr; Schallert 5, dr; Walsh 7, spudded in; Beecher 1, dr; Singer 11, dr. Magnolia Pet. Co.'s Spear 1, dr. Maurer & Duggan's Hoffman 1, dr; Cuellar 3, plugging. G. B. Pickett's No. 1, survey 230, dr. Simms Oil Co.'s Schallert 1, dr. Texas Co.'s Dinn 1, plugging.

GONZALES COUNTY—Martin Oil & Development Co.'s Preston 1, casing pulled out at 1500 ft, preparing to ream.

GUADALUPE COUNTY — J. M. Davis' Payne, Bond, Shaw 1, dr; Rosenbrook 1, dr; Weinert 1, ru. Mid-Kansas' Herman 1, dr. Texas Company's Glenwinkle 1, got soft chalk at 1054 ft. Wildman & Blackwell's Smith 1, dr.

KLEBERG COUNTY — Humble Oil & Ref. Co.'s Dennett 1-C, 17 feet in sand at 2280 ft, production better than 175 bbls.

STARR COUNTY — Danciger Oil & Ref. Co.'s Newman 1, dr. Decker & McCarley's Garcia 1, dr. T. C. Hadley's M. M. Garcia 1, survey 538, dk. L. Pearson et al's Pefley 1, dr. Southern Exploration Co.'s Fee Porcion 1, no report.

ZAPATA COUNTY — Howard-States et al's Hinnant 1, spudding in. Killam's No. 1, survey 307, dr. Texas Company's Jennings 3, preparing to bail at 4100 ft.

West Texas Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Brewster County—		
John Roseborough et al's Skinner 1	*	1025
Crane County—		
Marland Oil Co.'s Cowden 1-A	457	2350
Hughes 2-D	115	2363
Hughes-Gibbs 2	25	2328
Ector County—		
Llano Oil Co. et al's Cowden 1	*	4008
Crockett County—		
Ben Simon & Cromwell's Shannon 1	*	3118
Fisher County—		
R. W. Rainy et al's Marberry 1	*	1550
Tom Green County—		
World Oil Co.'s Pulliam 1	*	4039
Howard County—		
Magnolia Pet. Co.'s	100	1601
Mitchell County—		
F. P. Zoch et al's J. J. Ford 1	*	3307
Reagan County—		
Marland Oil Co., & Frank Pickrell's Sawyer 1	*	3217
Sterling County—		
Co-Operative Dev. Co.'s E. W. Douthitt 1-A	*	3232

DRILLING REPORT

ANDREWS COUNTY—Amon G. Carter & Henry Zweifel's Cowden 1, rig. Maer-Stanforth et al's W. S. Taylor 1, lcn. Henry Zweifel et al's Means 1, lcn.

BORDEN COUNTY—Bob Penn & Julian Pet. Co.'s A. J. Long 1, dr 470 ft.

BREWSTER COUNTY— Green Valley Oil Corp.'s J. P. Wilson 3-A, dr 1600 ft. John Rosebaugh et al's Skinner 1, dry and abn 1025 ft.

COKE COUNTY—Lipan Oil Co.'s Rawlings 1, fsh tools 2706 ft.

CONCHO COUNTY — Arkansas Fuel Oil Co.'s Hartgrove 1, lcn. Culbertson Bros. & Co.'s W. G. See 1, dr 1940 ft. Associated Pet. Co.'s John Waring 1, dr 565 ft. Eugene Mays et al's Hartgrove 1, ur 8¼ inch cas 1132 ft. The Exploration Co.'s Wilson-Hartgrove 1, sd 1115 ft. Mullens-Davis et al's Martin 1, dr 180 ft. Marland Oil Co. et al's Sansom 1, lcn.

CRANE COUNTY— Duffey Bros. et al's Cowden 1, elevation 2461 ft, top salt 752 ft, top lime 2900 ft, plugging back from 3296 ft to shoot with 600 quarts. Gulf Production Co.'s University-Lassiter 1, elevation 2608 ft, top salt 1163 ft, top lime 2894 ft, flowed 125 bbls oil at 2975-3070 ft; Crier-McElroy 4, dr 470 ft; Crier-McElroy 2-A, rig; J. T. McElroy 2-A, elevation 2601 ft, top salt 1000 ft, top lime 2697 ft, flowing 75 bbls 32.6 gravity oil 2824-81 ft; J. T. McElroy 4, dr 125 ft; J. T. McElroy 5, rig. Magnolia Pet. So.'s University-Hardwick 1, elevation 2559 ft, dr 2800 ft; O'Keefe 2, elevation 2603 ft, top salt 1180 ft, swabbed 110 bbls oil 2975-3015 ft; O'Keefe 3, rig; Lassiter 1, dr 440 ft. Magnolia et al's University-Church 3, top salt 1137 ft, dr 2475 ft. Marland Oil Co.'s Cowden 1-A, completed swabbing 457 bbls oil after shot 2350 ft; Cowden 2-A and 3-A, lcns; Dawson 1, dr 3220 ft; Durham 3, dr 2350 ft after shot; Hughes C-4, show oil 2385 ft, dr 2410 ft; Hughes 2-D, completed 115 bbls 2363 ft; Hughes 3-D, 4-D and 5-D, lcns; Hughes-Gibbs 2, swab 25 bbls after shot 2302-28 ft. Marland & F. P. Zoch's Cowden 1-B, dr 430 ft. McMan O. & G. Co.'s Hughes 1, rig. Prairie O. & G. Co.'s University 1-A, elevation 2590 ft, top salt 1140 ft, dr oil pay 3038 ft; University 2-A, elevation 2600 ft, top salt 1148 ft, top lime 2905 ft, swabbing 110 bbls oil 2990-3022 ft; University 3-A, rig; University 1-B, top salt 990 ft, dr 1035 ft. Ben Simon & Cromwell's Brookfield 1, elevation 2317 ft, top salt 680 ft, fsh 2210 ft. Simms Oil Co.'s Hughes 1, rig. Simms & Atlantic Oil Prod. Co.'s University 1, elevation 2588 ft, top salt 1134 ft, dr 2540 ft. Stidham & Thrasher's University 1, machine. The Texas Co.'s King 10, swabbing 70 bbls 2306-64 ft; King 11, swabbing 125 bbls 2322-60 ft; King 12, dr 2140 ft. Texas Dev. Co.'s Cowden 1, sd 3820 ft. Tidal Oil Co.'s University 2-B, elevation 2587 ft, top salt 1134 ft, dr 2895 ft; University 1-C, elevation 2583 ft, top salt 1143 ft, show oil, dr 3014 ft. Henry Zweifel & Hofmeier's Cowden 1, elevation 2630 ft, top salt 980 ft, dr 1605 ft.

CROCKETT COUNTY—Cranfill Bros. Oil Co.'s Harris 1, top salt 1090 ft, dr 1280 ft. Cumberland O. & G. Co. et al's Couch 1, sd 2025 ft. Gulf Prod. Co.'s Powell 1-D, top lime 2585 ft, fsh 2590 ft. J. K. Hughes Dev. Co.'s Pawell 2-A, elevation 2795 ft, top salt 1140 ft, hole full oil 264-705 ft; Powell 3-A, dr 2640 ft; Powell 2-B, dr 2535 ft. Humble & Marland Oil Co.'s Powell 1-B, top lime 2585 ft, 500 ft oih 2650-69 ft. Magnolia Pet. Co.'s Shannon 2, dr 345 ft. Republic Prod. Co.'s Powell 2, rig. Wm. Schaeffer et al's University 1, showing oil, dr 2344 ft. J. D. Young & Cromwell's Shannon 1, top salt 920 ft, dr 930 ft; University 1, 8¼ cas 580 ft.

CROSBY COUNTY—El Capitan Oil Co.'s Robertson 1, dr 500 ft.

CULBERSON COUNTY — Big Lake & Plymouth Oil Co.'s C. L. Cass 1, ur 8¼ cas 1945 ft. James H. Gardner et al's Radford-State 1, rig. Pure Oil Co.'s T P Fee 1, dr 1515 ft.

JEFF DAVIS COUNTY—Humble O. & R. Co.'s McCutcheon 1, fsh 3640 ft. J. K. Hughes Dev. Co.'s J. Z. Means 1, dr 790 ft; Means 2, lcn.

ECTOR COUNTY—J. S. Cosden et al's Connell 1-A, showing oil, dr dark brown lime 3810 ft. The Exploration Co.'s TP Fee 1, elevation 3231 ft, top lime 4005 ft, dr 4145 ft; J. D. Slator 1, cavey hole 415 ft.

FISHER COUNTY—The California Co.'s R. G. Anderson 1, lcn. Bourbon Royalty Co.'s J. A. Danise 1, lcn. Caldwell et al's Rochelle 1, lcn. Danciger O. & R. Co.'s Lanius 1, lcn. Gibson-Johnson's J. W. Wheeler 1, lcn. Hucony Gas Co.'s Langford 1, lcn. Fred Phillips et al's C. M. Webb 1, rig. Shamrock Pet. Co.'s Weler 1, dr 1050 ft. R. W. Rainey et al's Marberry 2, lcn.

GLASSCOCK COUNTY—Marland & Texon's Settles 1, dk. Marland & Parrish & Co.'s Calder 1, fsh 2295 ft. Plateau Oil Co.'s L. S. Bell 1, fsh 2270 ft.

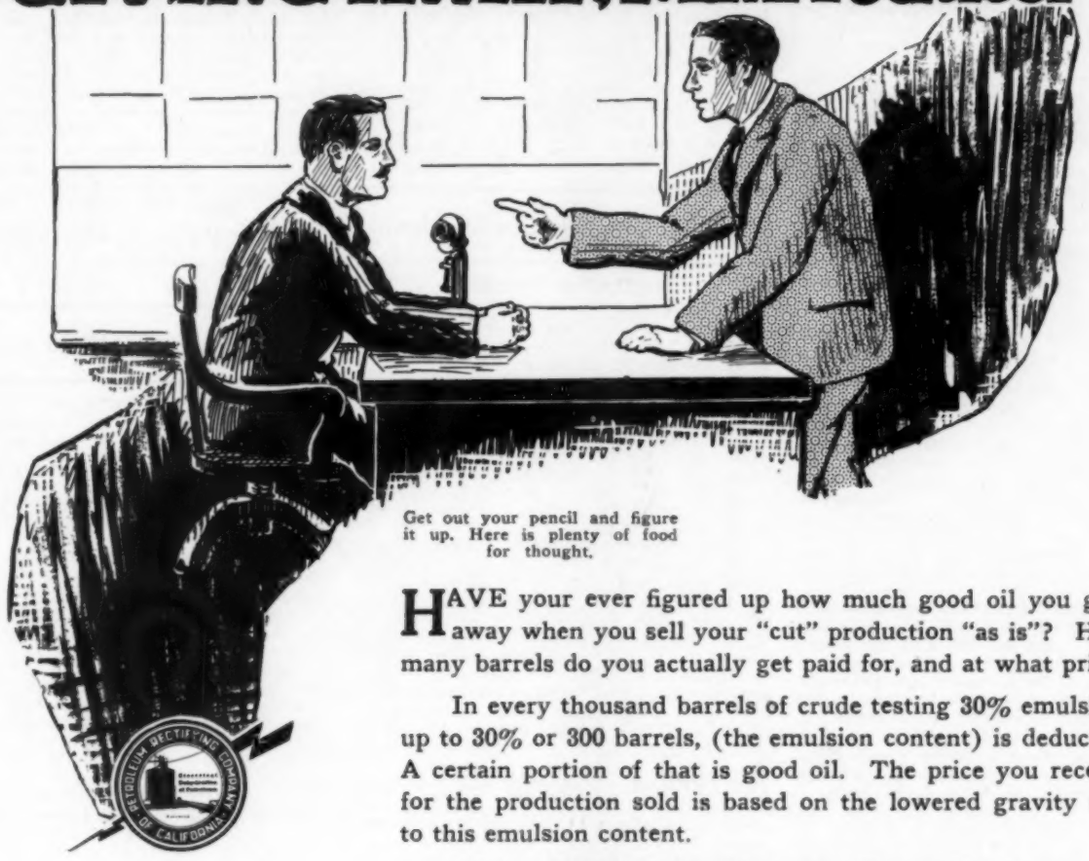
TOM GREEN COUNTY—M. D. Bryant et al's Fannin-Llano 1, probably abn 2980 ft. Texon & Marland's Sorrell 1, dr 1980 ft.

HOCKLEY COUNTY—El Capitan Oil Co.'s Ellwood 1, fsh 1625 ft.

HOWARD COUNTY—Francis & Brunson's J. W. Furrh 1, lcn. Gulf Prod. Co.'s Chalk 1, dr 1570 ft. Humble O. & R. Co.'s Douthitt 1, elevation 2393 ft, show oil 1395-1400 ft, dr 1405 ft. Lockhart & Co. et al's Roberts 1, dr 1780 ft; W. T. Scott-Hyman 1, sd 2750 ft. Magnolia Pet. Co.'s Hyman Chalk 1, lcn; Mary Chalk 2, dk; G. O. Chalk 4, sd 1127 ft; Chalk 5 and 6, lcns; Owen-Chalk 5-A and 6-A, lcns. Marland Oil Co.'s Bryce 1, lcn; Chalk 4, testing 1200 ft oih 1620-46 ft; Chalk 5, stdz 1447 ft; Chalk 1-A, dr 350 ft; Chalk 2-A, rig. Reeves & Apperman's H. R. Clay 1, dr 1340 ft.

JONES COUNTY—Atlantic Oil Prod. Co. et al's E. Howell 1, dr 1985 ft. Bateman & Compbell's Southard 1, rig. Cole-Hart et al's Cranston 1, dr 1100 ft. Gibson-Johnson et al's John Sears 1, sd 2270 ft; Mrs. J. V. Wright 1, dr 1300 ft; C. M. Largent 1, rig. Gillette & Hickey's S. W. King 1, dr 1775 ft; M. E. Young 1, dr 1165 ft. Marland Oil Co.'s S. R. Cox 1, fsh 2780 ft; Mason-Harris 1-A, dr 1960 ft; Mason-Harris 2, dr 1125 ft; Mason-Harris 3, rig. Mid-West Exploration Co.'s Thornton 1, quit flowing, deepened to 2517 ft, co to shoot; Thornton 2, lcn. Grisham-Hunter & Wylman's Birchfield 1, rig; Williams 1, rig.

HOW MUCH OIL *are you* GIVING AWAY, Mr. Producer?



Get out your pencil and figure it up. Here is plenty of food for thought.

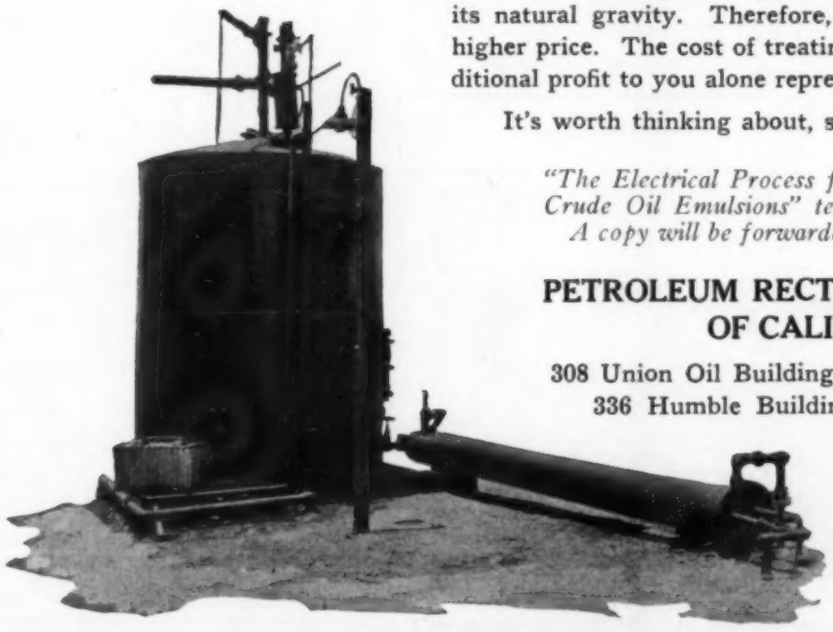
HAVE your ever figured up how much good oil you give away when you sell your "cut" production "as is"? How many barrels do you actually get paid for, and at what price?

In every thousand barrels of crude testing 30% emulsion, up to 30% or 300 barrels, (the emulsion content) is deducted. A certain portion of that is good oil. The price you receive for the production sold is based on the lowered gravity due to this emulsion content.

"Petreco" eliminates such waste. By treating your emulsified crude the "Petreco" way, the recovery of good oil from the emulsion content of your gross production is raised to its natural gravity. Therefore, you sell more oil, and at a higher price. The cost of treating is so small that the net additional profit to you alone represents substantial dividends.

It's worth thinking about, seriously.

"The Electrical Process for the Dehydration of Crude Oil Emulsions" tells the complete story. A copy will be forwarded to you on request.



PETROLEUM RECTIFYING COMPANY OF CALIFORNIA

308 Union Oil Building, Los Angeles, Calif.
336 Humble Building, Houston, Texas

Muse-Robertson's Manley 1, dr 560 ft. Garland & Diamond's Glynn 1, lcn. Hutson & Weaver's A. T. Smith 1, rig. Vic H. Martin et al's Culbertson 1, sd 445 ft. Phillips Pet. Co.'s Joe Winters 2, dr 990 ft; Tessie-Walling 1, small show oil and gas 2495-97 ft, dr dry hole 2521 ft. Wm. Sudderth et al's Turner 1, rig. World Oil Co.'s A. W. Clark 1, spd and sd. Zeigler et al's Reeves 1, sd 615 ft.

KENT COUNTY—The Texas Co.'s Barron 1, dr 4475 ft.

KIMBLE COUNTY—Dixie Oil Co.'s Harrison 1, sd 1710 ft.

LOVING COUNTY—Duffey Bros. & Arnold's Johnson 1, lcn. Lockhart & Co.'s R. L. Allen 1, elevation 2682 ft, top Delaware 4178 ft, dr with 2000 ft oih 4211-71 ft.

LYNN COUNTY — Hart Oil Corp.'s Edwards 1, co 1390 ft.

MENARD COUNTY—Elliott & J. R. Lewis' White 1, sd 180 ft. Clark et al's Kothman 1, dr 380 ft.

MITCHELL COUNTY—Magnolia Pet. Co.'s Mary Foster 2-A, dr 135 ft; Foster 3, dr 715 ft; Foster 4, dr 155 ft. Mid-Kansas O. & G. Co.'s Ellwood 2, sd 3200 ft. Morrison-Thompson's Griffith 1, dr 735 ft. Owens-Sloan Oil Co.'s C. P. Conway 1-A, sd 3205 ft. Teas-Stover et al's Hardee 1, junked 475 ft. Riley & Donnelly's R. H. Crump 1, lcn. B. E. Walters et al's J. E. Dalton 1, sd 300 ft.

NOLAN COUNTY—Henry Zweifel & Hofmeier's Longbotham 1, sd 285 ft. McCleskey et al's Pepper 1, lcn.

PECOS COUNTY—T. R. Cowell's J. C. Trees 1, dr 870 ft. Del Rio Drilling Synd.'s K. C. & Ft. Stockton 1, lcn. Dixie Oil Co. & Plateau's Canon 1 and 2, lcns. Cromwell & Kimberlin's Scharff-Blackman 1, spd and sd. J. G. Buell & Hagan's So. Life Ins. Co. Fee 1, fsh 600 ft; University 1, lcn. Mid-Kansas & Transcontinental's Yates 1, mudded in well when flowing 130 bbls oil daily 990-97 ft. Stockton Oil & Land Co.'s Perry 1, lcn. Quinby Oil Co.'s Bennett 2, dr 575 ft; Townsite 1, dr 3385 ft.

REAGAN COUNTY—The California Co.'s University 1, elevation 2821 ft, top salt 1300 ft, dr 1760 ft. Hiwatha Oil Co.'s University 1, dr 360 ft. Moody Oil Corp.'s Sawyer 1, dr 1520 ft. Texon Oil & Land Co.'s University 6, Group 2, dr 370 ft. Marland & Geo. Anderson's University 1, lcn.

REEVES COUNTY—Deep Rock Oil Co.'s Caldwell 1, rig. Grisham-Hunter Corp.'s State 1, dr 2715 ft. Humble O. & R. Co.'s TP Fee 1-M, lcn, . World Oil Co.'s Biggs-Holder 1, dr 970 ft.

RUNNELS COUNTY—Bell & Moore's W. W. King 1, spd and sd; Ferguson 1, dk. Red Bank Oil Co.'s Fawler 1, dr 2340 ft. F. P. Zach et al's Bruce 1, dr 2600 ft. Frank Yates et al's McMillan 1, dk.

SCHLEICHER COUNTY— Beavers-Leath's Whitten 1, spd and sd. Cope-Dalton et al's Sol Meyers 1, dr 2650 ft.

SCURRY COUNTY—Northwest Co.'s Stinson 1, top lime 1487 ft, cem 10-inch cas 1520 ft.

STERLING COUNTY—The California Co.'s J. T. Davis 1-A, dr 1580 ft. J. P. Williams et al's Clark 1, dr 450 ft.

TAYLOR COUNTY—City of Abilene's Fee 1, dr 2205 ft. Gibson-Johnson's Haines-Hamilton 1, spd and sd. Grisham-Hunter Corp.'s D. D. Huddleston 1, dk. Noodle Creek Oil Co.'s Alice Rose 1, rig. Sanger O. & R. Co.'s Cox 1, swedge 10-inch cas 1805 ft; Gillespie 1, dr 360 ft.

TERRELL COUNTY—Sun Oil Co.'s N. M. Scott 1, dr sandy-lime 3490 ft. E. T. Williams et al's Cowden 1, sd hfw 2825 ft.

TERRY COUNTY—Kingsland Oil & Potash Co.'s Brownfield 1, sd 470 ft.

UPTON COUNTY — Gulf Prod. Co.'s Hughes 1, rig; J. T. McElroy 1-C, dr 100 ft; McElroy 2-C, spudding; Shirk 1-E, elevation 2742 ft, top salt 758 ft, top lime 2148 ft, swab 80 bbls 28.6 gravity oil 10 hours 2290-2318 ft. L. E. Hults et al's Giddings 1, dr 200 ft. Johnson-McCamey & Atlantic Oil Prod. Co.'s Shirk 1, elevation 2738 ft, swab 50 bbls oil at 2320-29 ft. Johnson-McCamey et al's Union 1, elevation 2715 ft, top salt 820 ft, dr 1605 ft. Marland Oil Co.'s Reese 1, elevation 2773 ft, top salt 720 ft, dr 1650 ft; Powell 1, dr 2055 ft; Shirley 1, showing oil 2048 ft, dr 2095 ft; Shirley 2, lcn; University 1, materials. Pure Oil Co.'s Shirk 1, lcn. Sartain Bros. & Davis' Bull 1, elevation 2831 ft, top salt 1660 ft, sd 2460 ft. Skelly Oil Co.'s O. P. Jones 1, fsh 3595 ft. Texon Oil & Land Co.'s Shirk 1, elevation 2752 ft, top salt 750 ft, dr 970 ft. Texon & Marland's Halff 1, elevation 2784 or 2625 ft, top salt 1440 ft, sulphur water 3820 ft, dr 3890 ft. Wentz Oil Corp.'s Shirk 2, rig.

VAL VERDE COUNTY—A. Blume et al's Moore 1, co 2675 ft. O. O. Owens & Caldwell's Mills 1, spudding. Douglas Oil Co.'s Sellers 1, spd and sd. East Del Rio Oil Co.'s Russell 1, sd 3065 ft. S. A. McCaskey's Sellars 1, dr 480 ft. Transcontinental's Stevenson 1, fsh 2215 ft. E. T. Williams et al's W. T. Holman-McNutt 1 dr 710 ft.

WINKLER COUNTY — Gibson-Johnson et al's R. A. Leck 1, lcn. Ed. S. Hill & Ladd-Simon's Amburgey 1, will skid rig, td 700 ft. McCullough & Marland's Tobe Morton 1, rig. R. S. Matthews et al's Cowden 1, fsh 1225 ft. Llano Oil Co.'s Scarborough 1, lcn. Pure Oil Co.'s T. G. Hendricks 1, lcn. Independent O. & G. Co.'s Hendricks 1, lcn. R. A. Westbrook Oil Corp.'s (sold to Southern Crude Oil Purchasing Co.) T. G. Hendricks 1, flowing 135 bbls 30 gravity oil daily 2965-3005 ft. F. P. Zoch et al's Sealy 1, dr 645 ft.

East Central Texas Wildcats

DRILLING REPORT

FALLS COUNTY—Callahan et al's Wilson Scott 1, J. A. Manchaca survey, lcn.

FRANKLIN COUNTY—L. E. Trout et al's O. W. Grandy 1, spudding.

FREESTONE COUNTY—J. S. Cosden et al's J. E. Woods 1, dr 1840 ft. Orbit Oil Co.'s F. A. Coleman 1, spd and sd.

HENDERSON COUNTY—Barkley-Meadows et al's Wm. McClung 1, W. M. Carroll survey, sd for fuel 1820 ft. Fred Haynes et al's Mrs. B. E. Purefoy 1, Wm. K. Newell survey, lcn.

HILL COUNTY—Killem & Phillips et al's T. B. Finley 1, lcn.

LIMESTONE COUNTY — Alexander-Lyles & The Texas Co.'s D. E. Cleaver 1, spudding. Bains Creek Oil Co.'s T. H. Jackson 1, lcn. W. K. Clayton et al's Thornton 1, elevation 495 ft, Austin chalk at 2640-2880 ft, coring 2905 ft. C. W. Green et al's A. M. Beall 1, rig. Harrison & Pandem Oil Corp.'s Bassett 1, dr 2900 ft. Humble O. & R. Co.'s Gunter 1, dr lime 3330 ft. Kosse Synd.'s Jones 1, dr 815 ft; Fenner 1, sd to abn 2920 ft. E. L. Smith Oil Co. et al's Jake Steubenrauch 1, dr 1750 ft. Oxford Oil Co. et al's J. B. Riddle 1-A, sd repairs 1385 ft.

McLENNAN COUNTY — Virtex Development Co.'s (D. H. Byrd) Bruce Duncan 1, sd 2002 ft. Castleman Creek Oil Co.'s Schaephearer 1, sd 1310 ft.

NAVARRO COUNTY—J. S. Cosden et al's J. H. Finch 1, fsh 3040 ft. McNeil et al's Pierce 1, dr 3265 ft. Reiter-Foster Oil Corp. & Henchcliffe's G. W. Ross 1, dr 815 ft. Riverland Oil Co.'s Strotter 1, sd 670 ft. Sun Oil Co.'s H. A. Swink 3-A, cemented 8¼ cas and standardizing 3942 ft. The Texas Co.'s Byron Cheney 1, elevation 322 ft, top chalk 2426 ft, dr chalk 2665 ft. Wood Stanley et al's M. E. Cox 1, Austin chalk 1915-2340 ft, dr 2400 ft.

Arkansas

BRADLEY COUNTY — Arkansas Fuel Oil Co.'s Arkansas Lumber 1, 25-16-12, dr 1855 ft. Magnolia Pet. Co.'s Arkansas Timber 1, 35-15-11, sw 3324 ft. McMurray et al's Southern Lumber 1, 7-15-11, sd 3255 ft. Phillips Pet. Co.'s Southern Lumber 1, 36-11-16, to rebuild dk 3186 ft.

COLUMBIA COUNTY — Gulf Ref. Co.'s Huggins 1, 31-17-22, dr 2305 ft. Haynes et al's Runyon 1, 3-16-21, rig. Ky-Ark Pet. Co.'s Ross 1, 29-19-20, sd 2600 ft. Pluto Oil Co.'s Dickens 1, 20-19-22, dk. Scott Phillips' Davis 1, 6-18-20, sd 2145 ft.

DREW COUNTY—McClintock et al's Ogle 1, 35-13-5, sw reset 4½-inch 2550 ft.

GRANT COUNTY—Jones & Watkins' Meek 1, 5-4-11, rig.

HEMPSTEAD COUNTY — Myers et al's Nichells 1, 17-11-25, sdtr 2260 ft.

JEFFERSON COUNTY—Decem Oil Co.'s Hensley 1, 7-3-10, sd 2595 ft.

LA FAYETTE COUNTY — Ken-Saw Pet. Co.'s Red River 2, 3-20-24, sw 2840 ft.

LITTLE RIVER COUNTY—Greeson et al's Waldrip 1, 4-13-21, sd 1740 ft. Grote et al's Allen 1, 2-13-29, sw 2941 ft. Johnson et al's Hawkins 1, 10-11-31, dr 1565 ft.

MILLER COUNTY—Lenze et al's Dale 2, 28-15-26, dr 1140 ft.

NEVADA COUNTY—Furen et al's Fuller 1, 6-13-21 ,set 6-inch 1182 ft. Humble O. & R. Co.'s Bodcau 4, 9-15-22, dr 3195 ft.

OUACHITA COUNTY — Grayson et al's Reynolds 1, 21-14-17, dk. Van Diver et al's Yarbrough 2, 2214-17, rig.

UNION COUNTY—Allison et al's Howard 1, 8-19-13, sd 15 ft. Belmont et al's Hollis 1, 15-18-15, dry 2227 ft; to deepen. Bondurant et al's Garner 1, 8-18-12, dr 2430 ft. Calgo Oil Co.'s Primm 1, 9-18-17, to set 8¼-inch cas 2812 ft. Grimes & Jones' Van Hook 1, 8-18-14, wosr 2254 ft. H. L. Hunt's Dykes 1, 21-18-12, coring 2790 ft. Marine Oil Co.'s Thompson 1, 10-18-13, dr plug 2524 ft. Mathews et al's Lewis 1, 1419-12, to deepen, 2678 ft. Mullen Trust's Hill 1, 10-18-16, coring 2575 ft. Natural Gas & Fuel Corp.'s Cordell 1, 9-18-13, dry 2527 ft. Simms Oil Co.'s Simmons 1, 9-18-13, cementing between 8-inch and 6-inch cas, 2465 ft. Southern C. O. P. Co.'s Hill 1, 5-18-13, 125 ft oil in hole, 2525 ft. Superior Oil Co.'s Cordell 1, 5-18-13, set 12½-inch 162 ft. Wingfield et al's Morrison 1, 5-19-13, dr 1415 ft.

Louisiana Wildcats

COMPLETIONS

Company, Well and Location	Initial Production Bbls.	Depth
Caddo Parish—		
Ohio Oil Co.'s Caddo Levee Board 1, 28-23-16	*	3107
Grant Parish—		
Keen & Woolf's Rider 1, 16-9-1e	*	2000
Tunica Pet. Co.'s L. & A. Oil Co. A-9, 3-8-2w	*	1968
Lincoln Parish—		
Arkansas Fuel Oil Co.'s Nobles 1, 18-19-3w	*	2935
Rapides Parish—		
Seip et al's Ball 1, 4-4-2w	*	2799
Winn Parish—		
Allen Drilling Co.'s Saunders 1, 21-13-3w	*	2336

DRILLING REPORT

BIENVILLE PARISH—Kimbrough et al's Cargyle 1, 27-15-8, set 10-inch 108 ft.

BOSSIER PARISH—Benton Synd.'s Bulkley 1, to resume dr 1594 ft. Collins & Woodley's Robertson 1, 22-23-12, dry 2702 ft. Doern et al's Bolinger 1, 9-22-11, fsh 2684 ft. Tubbs et al's Jacobs 1, 20-16-12, sd 50 ft.

CADDO PARISH—Acke man et al's Payne 1, 35-23-16, rig. Dixie Oil Co.'s Jolley 1, 27-22-15, dr 4420 ft; Slattery 10, 27-21-15, fsh 3400 ft. Magnolia Pet. Co.'s Bradford 1, 24-21-15, fsh 4105 ft; Dillon 16, 24-21-15, testing 3695 ft. The Texas Co.'s C. M. L. 42, 23-21-15, wosr 3918 ft.

CATAHOULA PARISH — S. D. Hunter's Tensas Delta 1, 36-10-7e, dr 1335 ft. Lochnager O. & G. Co.'s Beazley 1, 26-9-6e, dk.

CALDWELL PARISH — Robbins et al's Beazley 1, 10-11-4e, sd 1020 ft. Southern C. O. P. Co.'s Caldwell A-5, 23-14-5e, dr 1440 ft. Victor Wenzel's Shaw 1, 22-14-4e, dr 1350 ft.

CLAIBORNE PARISH—Gilliland Oil Co.'s (Ramsey) Taylor B-10, 14-23-8, shot with 10 quarts 4520 ft; swabbing 20 bbls oil 3529 ft. Mitchell et al's Wilburn 1, 23-19-7, dk. Root Ref. Co.'s Cheatham 1, 19-22-6, dk. Triangle Drilling Co.'s Caskey 1, 7-19-5, dr 1210 ft; Keen 1, 7-19-5, sd 4662 ft. Underwood et al's Bullock 1, 2-20-7, dr 1005 ft.

DE SOTO PARISH—Clark & Melat's Billingsley 1, 12-11-16, dr 1360 ft. Craige & Montze's Riggs 1, 27-15-13, sd 1390 ft. Dixie Oil Co.'s Jenkins 1, 9-12-11, testing 4868 ft. Helm et al's Joyner 1, 28-12-11, dr 1925 ft. Magnolia Pet. Co.'s Mason 1, 28 12-11, lcn. Snapp et al's Lanier 1, 7-11-11, set 10-inch 120 ft.

EAST CARROLL PARISH—T. A. Snell's Nicholson 1, 25-20-12e, skidding over.

FRANKLIN PARISH—Arkansas Fuel Oil Co.'s Blue 1, 9-12-6e, dr 1460 ft. Roxana Pet.

(Continued on page 93)

PERMITS GRANTED FOR NEW WELLS

Weekly Comparison of New Wells

Following is a condensed table giving a comparison of permits or locations made for new wells during the past year in Kansas, Oklahoma, Arkansas, Louisiana, Texas and California:

	Mar. 1926	Apr. 1926	May 1926	June 1926	July 1926	Aug. 1926	Sept. 1926	Oct. 1926	Nov. 6	Nov. 13	Nov. 20
Arkansas	106	124	103	100	107	65	62	57	9	10	5
California	116	135	79	69	80	103	106	118	34	25	23
Louisiana	145	150	109	107	141	93	113	115	20	20	24
Kansas	160	170	156	161	143	119	124	148	46	34	29
Oklahoma	419	593	471	411	522	396	398	431	131	117	88
Texas	817	1070	941	1168	1468	1073	1021	1312	282	201	211
Mountain States	...	...	113	124	108	106	101	93	22	16	35
Total	1763	2242	1972	2149	2569	1955	1905	2274	544	423	415

MOUNTAIN STATES

COLORADO

W. T. Morris' No. 1, NE¼ 22-12-100.

NEW MEXICO

Federal Drilling Syndicate's No. 1, NW¼ 8-29n-7w. Nay & Houghton's No. 1, NW¼ 22-18s-33e. Ohio Oil Co.'s No. 1, NW¼ 6-18s-33e No. 1, NE¼ 22-16s-30e. M. E. Turner's No. 1, SE¼ 25-17s-30e. Nay & Houghton's No. 1, NE¼ 33-18s-33. Delmar Oil Co.'s No. 1, NW¼ 22-11s-26e. Prairie Oil & Gas Co.'s No. 1, SE¼ 10-17-31. Ohio Oil Co.'s No. 1, 24-7n-29. Argo Oil Co.'s No. 1, 5-7-31. Gibson Oil Co.'s No. 1, 25-8n-32.

SOUTH DAKOTA

Western South Dakota Oil & Gas Co.'s No. 1, SE¼ 19-9s-8e.

UTAH

Snowden & McSweeney's No. 1, NE¼ 5-27-21. Perfection Oil Co.'s No. 1, SW¼ 30-20s-22e. Crystal Oil Co.'s No. 2, SE¼ 24-20s-21e. Utah Petroleum Corp.'s No. 1, Lot 18, 1-30s-20e; No. 1, NE¼ 36-41-17. Maude Ellen Oil Co.'s No. 1, SE¼ 28-3s-21e. Western States Development Co.'s No. 1, SW¼ 27-21s-19e; No. 1, SW¼ 34-29s-20e. California Petroleum Co.'s No. 1, SE¼ 21-27n-113w.

MONTANA

Bottineau-Minot Oil Co.'s No. 2, SW¼ 33-35n-1w; No. 3, SW¼ 33-35n-1w. Ferdig Oil Co.'s No. 18, SE¼ 29-35-1w. Adams Oil Co.'s No. 2, NW¼ 33-35-1w. Hannah Oil Co.'s No. 1, NW¼ 18-34-1w. California Co.'s No. 9, SW¼ 26-35-2w; No. 5, SE¼ 28-35-2w. Carter Oil Co.'s No. 3, NW¼ 10-35-2w; No. 1, NE¼ 25-24-1w;; No. 1, NE¼ 4-33-2w. Hardrock Oil Co.'s No. 4, NE¼ 26-35-2w. California Co.'s No. 1, NE¼ 22-34-1w; No. 11, SE¼ 7-35-2w. Duluth Oil Co.'s No. 6, NW¼ 32-35-1w.

CALIFORNIA

Bedridge—Carneros Oil Co.'s No. 4, 31-28-21.

Huntington Beach—Shoreline Oil Co.'s No. 2, 10-6-11. Petroleum Securities Co.'s Gries 1, 10-6-11; Lewis 1, 10-6-11. Standard Oil Co.'s Bolsa 27, 34-5-11. California Pet. Corp.'s Fee 2, 10-6-11; Fee 3, 10-6-11; Brockman 1, 10-6-11. Golden Rod Oil Co.'s Golden Rod 2, 2-6-11.

Inglewood—Standard Oil Co.'s Stocker 9, 16-2-14; Baldwin-Cienega 32, 17-2-14.

Kern River—General Pet. Corp.'s No. 23, 14-28-27.

Long Beach—E. B. Campbell & H. R. Macmillan's No. 1, 29-4-12.

Midway—Standard Oil Co.'s No. 63, 31-31-24. Honolulu Cons. Oil Co.'s No. 88, 6-32-24. Standard Oil Co.'s No. 34, 17-32-24.

Richfield—Union Oil Co.'s Morse 7, 29-3-9.

Santa Barbara Co.—Miley Oil Co.'s No. 1, 3-4-29.

Santa Cruz Co.—Gerard Ryzek's No. 1, 14-11-2.

Seal Beach—Pan American Pet. Co.'s Naples 1, 3-5-12.

Sunset—The United Oil Co.'s Triangle 2, 32-12-23.

Torrance—C. C. M. O. Co.'s Del Amo 64, 16-4-14.

Ventura—General Pet. Corp.'s Barnard 12, 28-3-23.

KANSAS

Butler County—Liberty Oil & Gas Company No. 2 Sluss "A", in the center of the south line of the southeast of the northeast of the southeast of 26-26-5e. Phillips Petroleum Company No. 2 Barnhill, in the southwest corner of the northeast of the northwest of 23-27-7e. Findiess and others No. 1 Staley, in the center of the northwest of the northwest of the northwest of 17-28-3e. Goens and others No. 1 Brooks, in the center of the northwest of the northwest of the southwest of 12-28-5e. Allison and Fitzwilliams No. 6 Kramer, in the center of the northwest of the southwest of the northwest of 3-28-6e.

Coffey County—Balliere and Tidal Oil Company No. 1 Smith, in the center of the south half of the southeast of the northeast of 16-21-13e.

Cowley County—Twin State Oil Company No. 2 Goodrich, in the center of the southwest of the southwest of the southeast of 21-31-4e. Marland Oil Company No. 4 Graham, in the center of the southeast of the southwest of the northeast of 15-32-4e; No. 1 Buckles, in the center of the northwest of the northwest of the northeast of 6-35-3e.

Greenwood County—The Prairie Oil & Gas Company and C. E. Roth No. 15, J. Porter in the northwest corner of the northeast of the southwest of 12-29-8e. Davis, Hazlett and others No. 1 Browning, in the center of the northeast of the northeast of the northwest of 22-22-10e. Simmons & Rhodes No. 1 Blank, in the northwest corner of the northeast of the northwest of 33-22-13e. Roth, Faurot and others No. 1 Laird, in the southwest corner of the northwest of 10-23-10e. Roth, Faurot and Manhattan Oil Company No. 2 Race, in the center of the south half of the south half of the northeast of 19-23-10. Pure Oil Company No. 7 Oliver, in the center of the southwest of the southeast of the northeast of 8-23-11e. The Texas Company and Simmons No. 2 "A" Edwards, in the southwest corner of the northwest of the southeast of the southwest of 16-23-11e; No. 4 McGilvray, in the center of the northeast of the southwest of the northeast of 17-23-11e. Empire Gas & Fuel Company No. 1 Edwards, in the center of the northeast of the northeast of the northwest of 21-23-11e. Gore & Skelly Oil Company No. 2 Inthurm, in the northeast corner of the southeast of the northeast of the southwest of 4-23-13e. Skelly Oil Company No. 2 Nixon, in the center of the southeast of the southwest of the southeast of 25-24-10e. National Refining Company No. 1 Smith in the center of the southeast of the southeast of the southwest of 5-24-11e. Winters & Harwood No. 1 Jackson in the center of the southeast of the southeast of the northwest of 25-25-8e. Bement Oil Corporation No. 1 Keller, in the center of the southwest of the southwest of the northeast of 31-25-10e. Morgan and others No. 1 Gregg, in the center of the southwest of the southwest of the northeast of 26-25-12e. Tidal Oil Company No. 30 Hull, in the southwest cornor of the northwest of the southwest of the southwest of 2-26-8e.

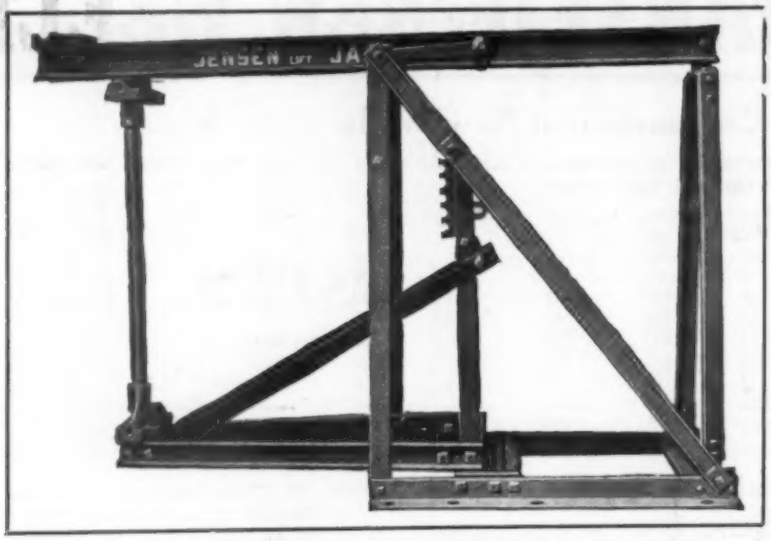
Lyon County—Golden and others No. 1 Lester, in the center of the southeast of the northeast of 16-21-11e.

Russell County—Mid-West Refining Company No. 22 Booth, in the center of the northwest of the southeast of the northwest of 32-11-15w. Liggett and others No. 1 Zibbell, in the center of the southwest of the southeast of the northwest of 20-12-15w.

Sumner County—Dickey and others No. 1 Caton, in the center of the southwest of the southwest of the southeast of 3-35-4w.

OKLAHOMA

Creek County—Riverland Oil Company No. 1 Land, in the center of the southwest of the northwest of 1-18-11e. Sunray Oil Corporation No. 12 Sango in the northeast corner of the southeast of the southeast of the southwest of 6-18-12e. The Texas Company No. 6 Simmons in the northeast corner of the southwest of the southeast of 3-17-9e. Bu-Vi-Bar Petroleum Corporation No. 1 Grayson, in the southwest corner of the northwest of the northeast



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of 16-17-9e. H. C. Wilson No. 1 Tiger, in the southwest corner of the 28-17-10e. J. R. Cole and others No. 1 Sparks, in the southwest corner of the northwest of the southwest of 18-17-11e. Curtis Oil Company No. 1-a, Rhea, in the southwest corner of the southeast of 23-16-10e. Quinland and Henry No. 3 Elrod, in the northeast corner of the southwest of 20-14-10e. Gled Oil Company No. 7 E. Ross, in the southeast corner of the northeast of the southwest of 13-19-8e. C. G. Tibbens No. 3 Herrod, in the northeast corner of the southwest (Twin) of 25-15-8e. C. G. Tibbens No. 1 Cloud, in the southwest corner of the northeast of 28-15-8e.

Garfield County—Sinclair Oil & Gas Company No. 27 Walker (South) in the northwest of the northeast of the southeast of 24-22-4w.

Kay County—Comar Oil Company No. 4-w Day, in the northeast corner of the southeast of the southeast of 20-29-1w. Comar Oil Company No. 13-w Duncan, in the northwest corner of the southwest of the southwest of 21-29-1w; No. 2 Bixby, in the northeast of the southwest of the northwest of 28-29-1w. Mississippi Valley Oil Company No. 2 Balzer, in the center of the southeast of the northeast of 3-27-2e. Marland Oil Company No. 1 Dillar, in the northwest corner of the southeast of 12-26-2w; No. 10 North, in the southwest corner of the northeast of 12-26-2w.

Logan County—Brown and Blevins No. 1 Lovell, in the southwest corner of the northwest of 9-18-4w.

Muskogee County—W. R. Sommerville No. 1 Dunwidder, in the southwest corner of the northwest of the northeast of 17-15-17e.

Nowata County—The Prairie Oil & Gas Company No. 31 Emma Campbell, in the northeast corner of the southwest of the northwest of 31-25-17e.

Okfuskee County—Josey Oil Company No. 5 Hulsey (Twin) in the northeast corner of the southeast of the northeast of 32-12-11e. Terrian and others No. 1 Brooks, in the southwest corner of the northeast of 14-11-10e. Eagle Pitcher Oil Company No. 1-a, Barnett, in the southwest corner of the northwest of 36-11-11e.

Okmulgee County—J. G. Hass No. 4 Bassett, in the center of the east line of the northwest of the northwest of 15-14-4e. W. B. Pine No. 2 Bighead, in the southwest corner of the northeast of the southeast of 9-15-12e. Spears Brothers No. 1 Kingor, in the northeast corner of the southeast of 12-14-12e. W. C. Newman No. 1 Wheeler, in the northeast corner of the northwest of the northeast of 8-13-11e. Diamond Oil Company No. 2 Jones, in the center of the east line of the northwest of the northwest of 27-13-11e. Moffett and others No. 4 Holmes (OWD) in the center of the east line of the northwest of the northeast of 7-11-12e.

Osage County—The Prairie Oil & Gas Company No. 1 in the northwest corner of the northeast of 31-25-8e; No. 4 in the northwest corner of hte northwest of 31-25-8e. Plymouth Petroleum Company No. 1 in the southeast corner of the northeast of 1329-11e. Ross & Brown No. 7, in the northeast of the southwest of the northwest of 14-29-11e. Phillips Petroleum Company No. 5 in the northwest of the southwest of the northwest of 7-27-6e. Kewanee Oil & Gas Company No. 2 in the southwest corner of the southeast of 34-27-6e. Osage Gas Producers No. 373 in the northwest corner of the northeast of the southwest of 5-27-11e. Marland Oil Company No. 3 in the southeast of the northeast of the northwest of 3-26-6e. Devonian Oil Company No. 1 in the northwest of the northeast of the northeast of northeast corner of the southeast of 31-25-7e. Marland Oil Company and others No. 1 in the northwest of the northeast of the northeast of 34-25-9e. Devonian Oil Company No. 1 in the southwest corner of 35-25-11e. Tidal Osage No. 2 in the southeast corner of the northeast of the southwest of 20-24-9e. Winona Oil Company No. 7 in the center of the north line of the south half of the southwest of 27-24-10e. Walker Oil Company No. 13 in the northeast of the southwest of the northwest of 34-24-10e. J. H. Tauber No. 1 in the southwest corner of the northeast of 1-22-9e.

Pawnee County—Garber & Pulse No. 1 Moore, in the southwest corner of the northeast of 9-22-6e.

Pittsburg County — Western Natural Gas Company No. 1 Long, in the center of the

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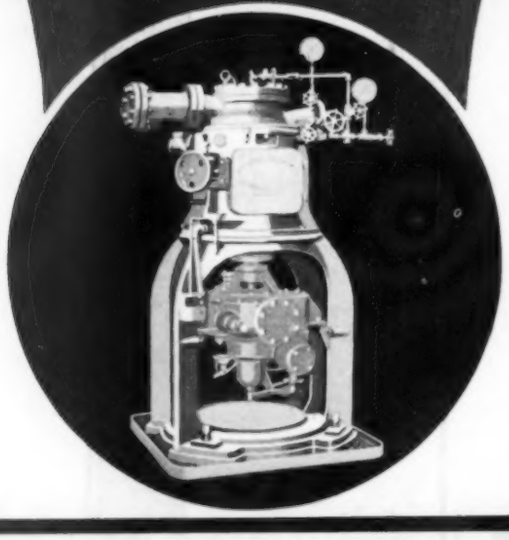

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west line of the east half of the northwest of the southeast of 36-9n-16e.

Pottawatomie County—Marland Oil Company No. 1 Dobbs, in the southeast corner of 8-9n-5e.

Seminole County—The Prairie Oil & Gas Company No. 1 Houck, in the southeast of the northeast of the southwest of 33-10-6e; No. 8 Kinkade, in the northwest of the southwest of the southeast of 33-10-6; No. 1 Cannon, in the southeast of the southwest of the northwest of 33-10-6e. Gypsy Oil Company No. 1 T Cudjo, in the northeast corner of the southwest of the northeast of 34-9n-6e. Atlantic Oil Producing Company and Independent Oil & Gas Company No. 2 J. Cudjo, in the northeast corner of the northwest of the southeast of 35-9n-6e. Carter Oil Company No. 3 Cudjo, in the southeast corner fo the northwest of the southwest of 35-9n-6e. Sinclair Oil & Gas Company No. 6 Cudjo "A", in the southeast corner of the northwest of the northwest of 35-9n-6e. Sinclair Oil & Gas Company No. 4 Cudjo "B", in the southwest corner of the southeast of the northwest of the northwest of 35-9n- 6e. Gypsy Oil Company No. 1 Stepney, in the southeast corner of the northwest of the southeast of 23-9n-7e. Indian Territory Illuminating Oil Company No. 1 Payne, in the northwest corner of the northeast of 2-8n-6e. Magnolia Petroleum Company No. 1 Holwell, in the northwest corner of the southeast of the northeast of 22-8n-8e. Continental Oil Company No. 1 Pierce (OWD) in the southwest corner of the southeast of 33-11-8e. Continental Oil Company No. 10 Pierce, in the center of the east half of the southwest of the southeast of 33-11-8e. Pure Oil Company No. 4 Thompson (OWD) in the northeast corner of the southeast of the southwest of the northeast of 26-10-5e; No. 1 Turner, Bruner, in the southeast corner of the southwest of the northeast of 26-10-5e No. 1 Turner, in the southeast corner of the southwest of the southeast of 26-10-5e. Sinclair Oil & Gas Company No. 8 Yarbrough (OWD) in the northwest corner of the northeast of 4-10-8e. Gypsy Oil Company No. 1 McFarland in the southeast corner of the southwest of 9-9n-5e; No. 1 Peter in the southwest corner of 10-9n-5e. Barnsdall Oil Corporation No. 1 Sparks, in the northwest corner of the northeast of the southwest of 11-9n-5e. Gypsy Oil Company No. 1 Bud Carter in the southwest corner of the southeast of the northwest of 11-9n-5e. Amerada Petroleum Corporation No. 2 Tulsay, in the northeast corner of the northwest of the northwest of 15-9n-5e; No. 3 Tulsay, in the southwest corner of the northwest of the northeast of 15-9n-5e. Carter Oil Company's No. 3 Davis, in the southeast corner of the northeast of the northeast of 4-9n-6e; No. 4 Davis, in the northeast corner of the southeast of the northeast of 4-9n-6e; No. 4 Knapp, in the northwest corner of the southwest of 13-9n-6e; No. 4 G. F. Killing, in the northwest corner of the southeast of 14-9n-6e. Mid-Continent Petroleum Corporation's No. 10 Rentie, in the northwest corner of the northeast of the southeast of 14-9n-6e. The Texas Company's No. 2 Mayhue, in the southeast corner of the southwest of the northeast of 14-9n-6e. Sinclair Oil & Gas Company and Transcontinental Oil Company's No. 3 Fixico, in the northwest corner of the southwest of the northwest of 23-9n-6e.

Stephens County—Green and others' No. 2 Williamson, owd, in the northeast corner of the northwest of the southeast of 12-1n-6w. Commercial Petroleum Company's No. 9 Fobb "B" in the northwest corner of the northeast of the southwest of 12-2s-5w.

Tulsa County—Suppees et al's No. 2 Ricketts, in the center of the south line of the southwest of the northwest of 5-17-13e. The Texas Company's No. 1 Scott, in the southeast corner of the northwest of the southeast of 18-17-14e.

Wagoner County—Harry Smith et al's No. 2 G. Pike, in the northeast of the northwest of the northeast of 20-18-15e. Severada Oil Company,'s No. 1 C. C. Brown, in the southwest corner of 36-18-16e. O. N. West's No. 3 E. R. McDonald, in the center of the north line of the northeast of the northeast of 3-16-15e. K. Wasoff's No. 1 N. L. Robbins, in the center of the southeast of 34-15-16e. Hale and Williams' No. 1 E. McIntosh, in the southwest corner of the northwest of the northeast of 1-15-17e.

LOUISIANA

Assumption Parish—The Union Sulphur Co., Sulphur, Clifton 1, 41-12s-13e, 100 ft S and 100 ft Wof NE corner of SE¼.

Caddo Parish—Bayou State Oil Corp., 1008 Slattery Bldg., Shreveport, Jolly 6, 21-22n-15w, 420 ft N and 200 ft E of SW corner of NW¼ of SE¼. Gulf Ref. Co. of La., Ardis Bldg., Shreveport, Ferry Lake 260, 28-20n-16w, 1420 ft W and 1020 ft S of NE corner of section; F. E. Wemple et al 3, 14-20n-15w, 200 ft S and 200 ft E of NW corner of SE¼ of SW¼; F. E. Wemple et al 4, 14-20n-15w, 200 ft S and 200 ft W of center of section. J. M. Miller, Vivian, Solley 5, 22-21n-15w, 400 ft N and 75 ft W of SE corner of SW¼. The Ohio Oil Co., P. O. Box 1129, Shreveport, E. K. Smith 24, 12-21n-15w, 642 ft N and 435 ft W of SE corner of section. Unity Petroleum Co., Tulsa, Okla., Crystal 8, 13-21n-16w, 283 ft N and 330 ft W of center of section; Crystal 9, 13-21n-16w, 1320 ft S and 990 ft W of center of section; Crystal 10, 13-21n-16w, 1320 ft S and 330 ft E of NW corner of SE¼; Crystal 11, 13-21n-16w, 408 ft S and 330 ft W of center of section; Crystal 12, 13-21n-16w, 964 ft N and 330 ft W of center of section.

Calcasieu Parish—Newton Development Co., Lake Charles, Leroy Simmons 1, 5-9s-8w, 335 ft S and 335 ft W of NE corner of SE¼ of NE¼. Rex Petroleum Corp., Orange, Texas, Hunter 4, 21-9s-11w, 465 ft N and 290 ft E of SW corner of SE¼.

Cameron Parish—Border Research Corp., P. O. Box 1387, Houston, Texas, Grank Lake & Mallard Bay 1, 6-13s-3w, 1000 ft S and 500 ft E from NW corner of section.

Franklin Parish—Arkansas Fuel Oil Co., Ardis Bldg., Shreveport, T. B. Gilbert Sr. 1, 9-12n-7e, 300 ft N and 300 ft W of SE corner of SW¼ of SE¼. H. M. Harrell et al, 208 Ricou-Brewster Bldg., Shreveport, Duncan 1, 20-13n-7e, 300 ft N and 300 ft W of SE corner of NE ¼of NE¼. Roxana Petroleum Co., Athletic Club Bldg., Dallas, Texas, S. Senseman 1, 18-14n-7e, 150 ft N and 150 ft E of SW corner of SW¼ of SE¼.

Grant Parish—Tunica Petroleum Co., 901 Commercial Bank Bldg., Shreveport, L. & A. Oil Co. 16, 5-8n-2w, 300 ft N and 300 ft E of SW corner of SE¼.

Iberia Parish—Border Research Corp., P. O. Box 1387, Houston, Texas, Vermillion Bay 1, 20-15s-6e, 700 ft W from SE corner of NW¼.

Jefferson Davis Parish—Fred I. Getty, Jennings, Lacesine Irrig. Co. 1, 6-11s-4w, 750 ft S and 450 ft E of NW corner of NW¼ of NE¼.

La Salle Parish—Louisiana Oil Ref. Corp., P. O. Box 1117, Shreveport, Tremont Lbr. Co. C-8, 2-9n-1e, 250 ft S and 250 W of NE corner of SE¼ of NW¼. Natural Gas & Fuel Corp., El Dorado, Ark., Mo. Pacific R. R. Co. 1, 26-10n-1e, 645 ft N and 465 ft E of SW corner of SE¼ of NE¼; Urania Lbr. Co. N-1, 35-10n-1e, 110 ft S and 480 ft E of NW corner of NW¼ of NE¼.

ARKANSAS

Union County — Hollifield et al's Giller 15, 11-17-16, center NW¼ SW¼. Imperial Oil & Gas Co.'s Ramsey A-2, 21-17-16, NWc SW¼ SW¼. Lion O. & R. Co.'s Warner 3, 21-17-16, SWc SE¼ SW¼. Magnolia Pet. Co.'s Laney 1, 8-16-16, SEc E½ NW¼ NE¼.

Ouachita County — Magnolia Pet. Co.'s LaGrone 6, 36-15-17, SWc SE¼ SW¼.

TEXAS

Report of drilling permits issued for week ending November 19, 1926, lease or owner, acreage, well, survey, distance to lease lines or well:

Archer County—Marland Oil Co. of Texas, Fort Worth, Turbeville 11, S 172, R. Carson sur, 150 ft to E and 1160 ft to S line; 13, same sur, 1160 ft to S and 750 ft to E line. Simms Oil Co., Dallas, Turbeville A13, B 172, R. Carson sur, 300 ft W of No. 11; Bur-Turbeville 3, B 142, same sur, 300 ft N and W of No. 1. T. B. Wilson 2, S 12, H&TC sur, 300 ft N of No. 1; 1, same sur, 750 ft to N and 150 ft to W line. The Texas Co., Wichita Falls, W. F. Parrish 17, SPRR sur, 660 ft to E and S lines; C. J. Chance 13, W. G. Griffith sur, 700 ft to W and 2500 ft to S line. Sam Kruger, Wichita Falls, H. D. Kun-

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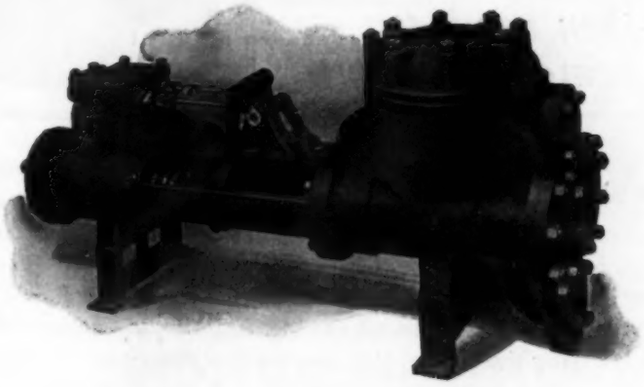

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kel 1, S 4, BBB&C sur, 150 ft to N and W lines. Humble Oil & Ref. Co., Wichita Falls, G. B. Hamilton 20, lot 1, I. Holman sur, 450 ft to W and NE of No. 18. W. M. Moore, Waggoner Bldg., Wichita Falls, M. E. Rogers 4, S 1596, 300 ft W of No. 2; J. R. Elliott, Box 434, Wichita Falls, T. B. Wilson 1, H. H. Kirk, sur, 150 ft to N and E lines. Muse & Robertson, Box 434, Wichita Falls, T. B. Selman 1, C. Lydings sur, 150 ft to E and 450 ft to N line. P. F. Gwynn, Wichita Falls, L. F. Wilson 1, W. Horrits sur, 150 ft to E and 450 ft to N line. Wichita Prod. Co., Waggoner Bldg., Wichita Falls, G. M. Boren 10, R. D. Newman sur, 300 ft N of No. 8. V. O. E. Wright, 8th St., Wichita Falls, J. Stehlik 1, B 6, DSCL sur, 150 ft to N and E lines. Roxana Pet. Corp., St. Louis, Mo., L. H. Farmer 1, W. C. Winters sur, 150 ft to E and S lines.

Armstrong County—Geo. W. Bilbro, trustee, Caprock Hotel, Claude, J. P. Rock 1, S 162, H&GN sur, 600 ft to N and 200 ft to W line.

Angelina County—Simms Oil Co., Dallas, J. F. Renfro 1, A. H. Forest sur, 150 ft to S and E lines.

Brown County—J. S. Cosden, Inc., F&M Bldg., Fort Worth, R. L. Westerman 5, N. P. Mitchell sur, B E 60 Ac, 300 ft N of No. 3; 4, same sur, 300 ft W of No. 3; J. T. Arledge 3, same sur, 300 ft W of No. 2. Moutray Oil Co., 3rd St., Abilene, J. M. Flores 9, S 149, BBB&C sur, 1530 ft to S and 150 ft to W line; (Callahan county) 5, same sur, 750 ft to N and 150 ft to W line. The Texas Co., Fort Worth, R. Hickman 8, T. S. Benson sur, B 783; W. N. Pugh 3, J. C. Pugh sur, 300 ft W of No. 1. Kone Prod. Co., Cisco, J. I. Foster 12, T. Benson sur, 150 ft to W and N lines; 10, same sur, 150 ft to W and 750 ft to N line. A. H. Bowers et al, Brownwood, C. L. Eeds 2, sur 636, 545 ft to E and 150 ft to S line; 1, same sur, 240 ft to E and 245 ft to S line. Amerada Pet. Corp., Box 746, Fort Worth, J. H. Fry 9, G. Stubblefield sur, 300 ft E of No. 5; 10, same sur, 550 ft to W and 850 ft to S line. Estate of R. G. Gillespie, 605 Park Bldg., Pittsburg, Pa., J. P. Newton 13, S 145, W. Swain sur, 915 ft to N and 500 ft W of No. 12; 1, S 148, W. Travis sur, 150 ft to S and E lines. M. E. Bishop, Brownwood, W. S. Sescott 4, W. H. Iron sur, 156 ft to E and 540 ft to NE line. Midwest Exploration Co., Coleman, Calbro 5, W. B. Travis sur, 150 ft to W and 213 ft to S line. G. P. Mitcham, Cisco, D. F. Wildon 1, A. McDonald sur, 150 ft to N and W lines.

Borden County—Julian Oil Corp., Amer. Exchange Bk. Bldg., Dallas, A. J. Long 1, S 10, B 30, T&P sur, center of NE¼ of NE¼ sec 10.

Brooks County—Kone Prod. Co., French Place, San Antonio, E. C. Lasater 1, sur 331, 620 ft to N and 150 ft to E line.

Brazoria County—Roxana Pet. Co., Houston, F. C. Pabst 2, J. McNeel sur, 25 ft to N and W. lines.

Bexar County—Schimmel Pet. Corp., Fort Worth, Schimmel 2, B 266, A. McSnyder sur, 510 ft N of No. 1. Associated Pet. Corp., Fort Worth, R. W. Caruthers 8, W. Caruthers sur, 625 ft S of No. 7.

Callahan County—J. K. Hughes Dev. Co., Mexia, Jack Flores 1, BBB&C sur, 150 ft to N and W lines; 2, same sur, 344 ft E of No. 1; 3, same sur, 344 ft E of No. 2; 4, same sur, 344 ft E of No. 3; 5, same sur, 353 ft S of No. 4; 6, same sur, 344 ft W of No. 5; 7, same sur, 344 ft W of No. 6; 8, same sur, 344 ft W of No. 7. House Oil Co., Baird, E. A. Hearn 4, S 129, BBB&C sur, 300 ft N of No. 2; 5, same sur, 300 ft N of No. 4. Carl Wolff, Baird, Jack Flores 2, S 149, BBB&C sur, 150 ft to N and W lines. Shackelford Oil Co., Putnam, M. A. Thomason 3A, sur 227 A, 140 ft to S and 750 ft to W line I. H. Fulcher, 501 S. Connellee, Eastland, H. B. Tatum 1, S. 150, BBB&C sur, 150 ft to N and W lines. Lyda Oil Corp., Cisco, W. M. Moore 1, S 3, GC&SF sur, 450 ft to N and 150 ft to E line. Phillips & Milam, Chelsea, Okla., J. M. Isenhower, 8, S 2273, TE&L sur, 450 ft to E and 1330 to S line. Harold A.

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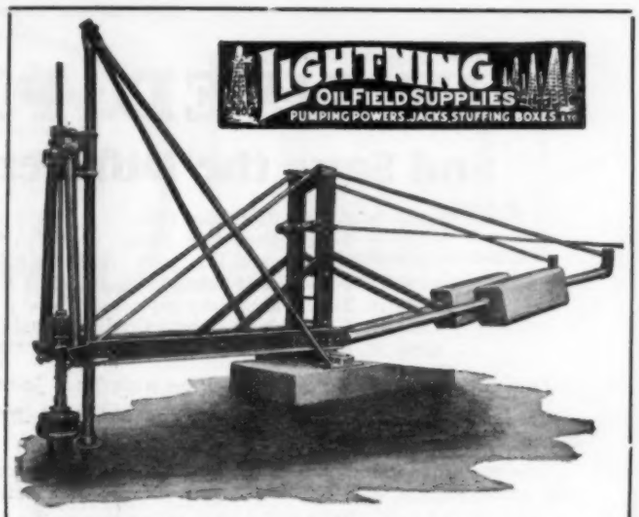

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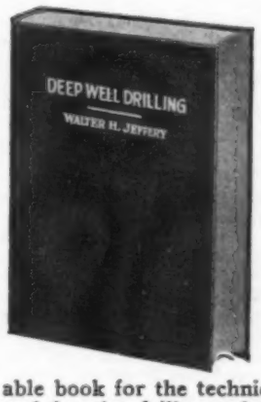

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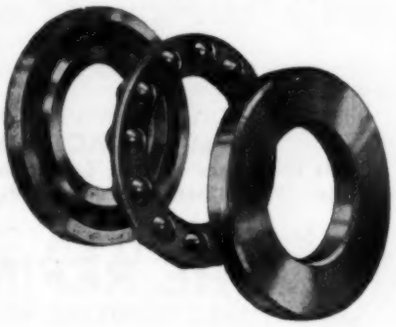

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Carson County—Roxana Pet. Corp., Tulsa, Okla., E. F. Bryan A4, S 92, B 4, I&GN sur, 1620 ft to N and 2310 ft to E line; D3, same sur, 2310 ft to N and E lines; D2, same sur, 1620 ft to N and W line; B2, S 107, B 4, 2310 feet South and 1650 feet to West lines. Republic Prod. Co., Rust Bldg., S. B. Burnett 4, S 197, B 4, I&GN sur, 330 ft to S and E lines.

Caldwell County—Humble Oil & Ref. Co., Houston, M. L. Brewer 7, P. Martinez sur, 150 ft to NW and 1578 ft to SW line; 16, same sur, 750 ft to SE and 150 ft to NE line. Glasscock Bros. Drilling Cont., Lytton Springs, Glasscock 2, J. Henry sur, 156 ft to SW and 150 ft to SE line. J. S. Storey, Lockhart, G. K. Brown 1, 150 ft to SW and 450 ft to SE line.

Coleman County—Monroe Prod. Co., Box 446, Coleman, M. T. Overall 2B, S 12, GH&H sur, B 1, 1980 ft to N and 1900 ft to E. lines. Archie Shaw, Burkett, W. T. Burns 22, A. Wickson sur, 2550 ft to E and 1650 ft to N line. The National Ref. Co., Cleveland, Ohio, S. De Busk 1, sur 166, 250 ft to S and E lines.

Cooke County—Jones & Eubank, Inc., Waggoner Bldg., Wichita Falls, Whaley-Crowder 1, W. C. Winters B4, 150 ft to N and E lines. Magnolia Pet. C., Dallas, A. Johnson 1, J. T. Clark sur, 150 ft to S and W lines. Greer & Kerper, Magnolia Bldg., Dallas, H. D. Field 1, S 23, BBB&C, 660 ft to SW and 100 ft E of county line.

Crane County—W. E. Duffey, Waggoner Bldg., Fort Worth, W. H. Cowden 1, S 8, B X, CC&SD&CGNG sur, 330 ft to S and E lines.

Clay County—E. J. Stump & Co., City Nat. Bk. Bldg., Wichita Falls, R. M. Waggoner 1, B 4 and 45, H. B. Eustic sur, 150 ft to SE and SW lines. W. D. McClure & Sons, Iowa Park, J. T. Alcorn 1, S 90, Wood sur, C S L, 165 ft to W and 170 ft to S lines.

Cartro County—Gulf Prod. Co., Fort Worth, S. Clements 1, Seale & Morris sur, S 27, 330 ft to S and W lines.

Duval County—O. W. Killam, Laredo, R. Lepoz 7, S 319, B 8, 600 ft SW of No. 8; 8, same sur, 500 ft SW of No. 5. Associated Oil Co., First Nat Bk. Bldg., Houston, S. Benavides 2, Share 6, sur 15, 1050 ft to NE and 4640 ft NW of No. 1. The Texas Co., Dinn 1, No. 668.

Eastland County—Moore & Lewis, Eastland, C. W. Connellee 1, N. Ussury sur, 200 ft to S and E lines Kirk & Brewer, Gorman, L. F. & C. B. Miears 1, W. De Mo sur, 200 ft to N and W lines. C. M. Root, Eastland, J. M. Ray 1, S 38, B 4, H&TC sur, 2200 ft to W and 300 ft to N line.

Ector County—Exploration Co. of Texas, San Angelo, P. Slaton 1, S 10, B 45, T&P sur, center of SW¼.

Fort Bend County—Gulf Prod. Co., Houston, H. Hausler 1, B. Wickson Lea sur, abt 500 ft E of Union Sulphur No. 4; J. H. P. Davis 1, B. Wickson sur, 1285 ft SW from NE cor, S 430 ft to well. Sun Oil Co., Beaumont, J. R. Farmer 2, J. Scott sur, 500 ft E of No. 1.

Freestone County—Boyd Oil Co., Mexia, R. Simmons 8, R. B. Longbotham sur, 300 ft N of No. 3. Staley & Wynne, Wichita Falls, R. Simmons 1, townsite of Wortham.

Fisher County—Hucony Gas Co., Box 673, Breckenridge, H. Langford 1, B 21, S 7, T&P sur, 600 ft to S and 150 ft to W line.

Gray County—Phillips Pet. Co., Bartlesville, Okla., H. M. Davis 4, S 86, B 3, I&GN sur, 330 ft to N and E lines; 3, same sur, 330 ft to N and W lines.

Guadalupe County—Magnolia Pet. Co., Dallas, S. Marines 21, H Cottle sur, 300 ft SE of No. 13.

Hardin County—Ada Belle Oil Co., Batson, Ed. Prather 112, J. Knight sur, E lot, 15 ft to SW and 37 ft to Ne line; Texas Co. 111,

S B, same sur, 50 ft to S and 100 ft to E line; 110, S A, same sur, 55 ft to NE and 120 ft to E line; 109 S K, same sur, 50 ft to NE and 28 ft to S line. The Texas Co., Houston, LeJarza Co. 3, A. M. Le Jarza sur, N 70 degrees, 1350 ft from TT Co. No. 1.

Harris County—Humble Oil & Ref. Co., Houston, Simms-Smith, 70 Scott, 300 ft N of No. 68; Rio Bravo Oil Co., Houston, Fee 66, Fee PF 6, J. A. Williams sur, 150 ft to N of PF 4, galena Signal Oil Co. of Texas, Humble I. G. Stevenson 19-A, J. B. Stevenson sur, GS 5, SE cor.

Hutchinson County—Phillips Pet. Co., Bartlesville, Okla., C. A. Patburg 6, S 67, B 46, H&TC sur, 330 ft to E and 990 ft to S line.

Henderson County—Barkley & Meadows, Wichita Falls, E. L. McClurry 1, A. Carroll sur, 750 ft to N and 450 ft to W line.

Harrison County—L. F. Bahan & C. Robbins, Shreveport, La., C. M. Abney 3, J. J. Blair sur, 1880 ft to S and 512 ft to W line.

Jack County—R. S. Matthews, Cosden Bldg., Tulsa, Okla., O. Loving 1, S 3345, TE&L sur, center of NE¼.

Jim Hogg County—Simms Oil Co., Dallas, J. Weil 8, B 16, sur 81, 150 ft to N and E lines. C. Palacios 18, BCSC, Hendrix sur, 300 ft S of No. 17, Alworth, Stevens, Hild, Box 23, Laredo, Garza 2, S 39, B 4, sur 39, 275 ft to E and 640 ft to N line. Moody-Morgan No. 2, Hebbronville, C. Palacios 2, S 291, B 11 and 12, 516 ft to S Blk 12, on W line of Blk. Trussell-Cezeaux & Putnam, Laredo, Palacios 1, S 232, B 2, 150 ft to W and N lines. Grayburg Oil Co., San Antonio, Weil Bros. 10, B 9, sur 81, 150 ft to S and E lines.

Jefferson County—Rio Brova Oil Co., Houston, T&NO RR of Way 55, J. Douthitt sur, 62 ft S of No. 6; 100, J. A. Veatch sur, 35 ft to W and 700 ft N of Florence No. 1.

Liberty County—Gulf Prod. Co., Houston, Phoenix Dev. 79, J. Devore sur, 300 ft N of No. 47.

Limestone County—Transcontinental Oil Co., Mexia, B. Atkins 5, 300 ft S of No. 1.

Montague County—Continental Oil Co. of Texas, Wichita Falls, W. W. Jones 6, W. Donoho sur, 365 ft N of No. 5; J. W. Rowland 20, J. Chambliss sur, 475 ft to N and 924 ft to E line; 19, same sur, 150 ft to W and 438 ft to N line; B6, E. Votaus sur, 322 ft N of No. 5; M. H. Salmon 5, W. P. Zuber sur, 1470 ft to N and 1562 ft to E line; J. W. Rowland 3, E. Votaus sur, 150 ft to W and S lines; J. W. Maddox 4, C. W. Thompson sur, 172 ft to E and 173 ft to S line. Lesh & McCall, Nocona, C. L. Rolls 7, J. Chambliss sur, 400 ft NW of No. 6; 8, same sur, 400 ft NW of No. 7. The Texas Co., Wichita Falls, J. W. Maddox 3, J. Chambliss sur, 150 ft to E and 1167 ft to S line; 3, C. W. Thompson sur, 300 ft S of No. 2. Humble Oil & Ref. Co., Wichita Falls, J. W. Maddox 12, G. W. Thompson sur, 100 ft to S and 300 ft W to No. 9. Pure Oil Co., Mexia, H. J. Howard 1, J. Chambliss sur, 150 ft to N and 200 ft to E line. Newblock Oil Co. of Texas, Box 7, Bristow, Okla., J. W. Maddox 10, J. Chambliss sur, 200 ft to S and E lines. C. W. Drilling Corp., Dallas, W. C. Mastor 1, Fielding-Secrest sur, 541 ft to N and E lines.

Mitchell County—California Co., Colorado, A. L. Miller 6, S 22, B 28, T&P sur, 660 ft to S of No. 5; 8, same sur, 990 ft to N and W lines; J. D. Petitfils 3, S 14, B 28, T&P sur, 660 ft E of No. 1. Magnolia Pet. Co., Dallas, C. M. Adams 7, S 11, B 28, T&P sur, 330 ft to N and 990 ft to W line.

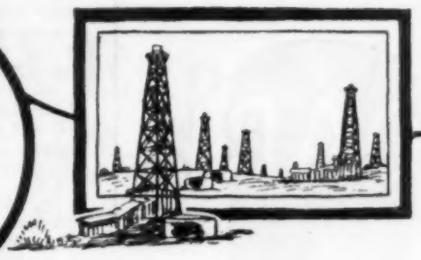
Marion County—Trimount Pet. Co.'s Slattery Bldg., Mebane & Stiles 1, to deepen, N. Gupton sur, SE cor.

Milam County—Wills Oil Co., Rockdale, J. P. Kevil 2, T. S. Arnett sur, 300 ft N of No. 1.

Medina County—Golden West Oil Co., San Antonio, Adams 1, S 14, B 2, E. & J. Duval sur, 452 ft to W and 904 ft to S line.

Navarro County—Sun Oil Co., Dallas, E. Swink 2, W. H. Hudson sur, 150 ft to NW and 495 ft to NE line.

Shackelford County—Home Oil & Gas Co., Albany, J. Laschber 4, B 545, TE&L sur, 1698 ft to NW and 1380 ft to SW line; 5, same sur, 1698 ft to SW and SE lines; 6, same sur, 1398 ft to SW and SE lines; 7, 1698 ft to



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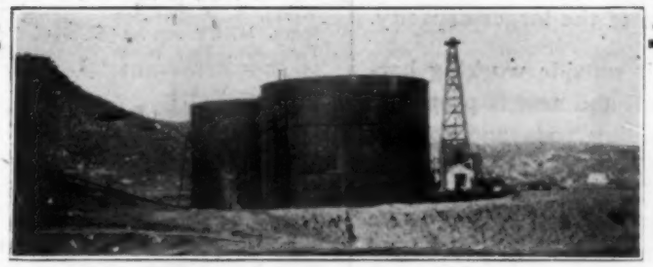

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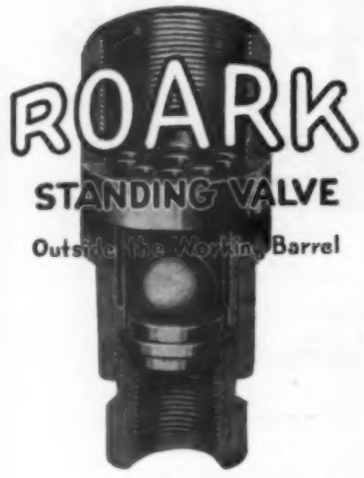

The Valve that Makes Pumping Pay

Pumping That Pays

Larger capacity—quicker action—more oil; and better oil. That's the Roark Standing Valve. Actual test shows 50% to 80% less cut oil and B. S. Because of the larger capacity.

Valve is outside working barrel. Ball and seat is protected from falling rods and foreign objects by heavy steel plate.

But one screw joint in valve body, making valve practically indestructible. Only wearing part is readily replaced at small cost. Renew ball and seat and seat frame, and valve is good as new.

It's now giving re-order satisfaction in hundreds of hands. It's the valve that makes pumping pay. Made in standard sizes.

Order From Your Supply House

Texas Oil Pump Company
Waco, Texas

NW and 1074 ft to SW line; 8, same sur, 1398 ft to NW and 1074 ft to SW line. T. G. Shaw Interest, Box 1317, Fort Worth, V. M. Formby 12, S 690, Orp. Asy sur, 300 ft W of No. 5. Milham Corp. of Texas, San Antonio, Z. W. Casey 23, S 581, TE&L sur, 300 ft W of No. 20. Barney Carter, Ranger, W. C. Huskey 1B, S 549, TE&L sur, 150 ft to NE and 750 ft to SE line. P. S. Kendrick, Albany, T. E. & L. Co. B4, S 39, TE&L sur, 450 ft to SW and 150 ft to SE line. Stalker Oil Co., Cisco, Goodwin & Walker 1, S 67, B 13, T&P sur, 150 ft to S and W lines NE¼.

Stevens County—Mook-Texas Oil Co., First Nat. Bk. Bldg., Fort Worth L. D. Head 6, S 31, B 6, T&P sur, 250 ft to E and 600 ft to S line. Riddle Heirs 2, S 25, B 6, T&P sur, 330 ft to N and W lines. W. R. Andrews et al, Putnam, W. R. Andrews 1, B 6, T&P sur, 470 ft to N and 700 ft to W line. Tripplehorn Bros., Magnolia St., Fort Worth, Stuard 1, S 27, B 6, T&P sur, SE cor of SW 90 acres.

Starr County—Milham Corp. of Texas, San Antonio, V. Guerra 1, Porcion 107, 14,520 ft to S and 1320 ft to E line.

Scurry County—E. E. Fogelson, Magnolia, T. F. Bryce 1, S 133, B 97, H&TC sur, 330 ft to S and W lines.

Throckmorton County—Red Bank Oil Co., Castle Bldg., Tulsa, Okla., J. H. Cole 1, B 972, TE&L sur, 466 ft to E and S lines; Overcash 1 B 960, TE&L sur, 466 ft to W and 566 ft to S line. Hoffer Oil Co., Fort Worth, J. A. Matthews 2, W. Redfield, center of B 2.

Tom Green County—Wiltmer Property, trustee, Pittsburgh, Pa., S. W. Roberts 1, S 16, B 10, SPRR sur, 1000 ft to N and 200 ft to E line.

Upton County—Dixie Oil Co., Inc., Shreveport, La., A. S. Burleson 10, S 100, B 3, T. C. Jones sur, 330 ft to N and 1620 ft to E line; 13, same sur, 330 ft to E and 900 ft to N line. Roxana Pet. Corp., McCamey, D. Bowen 5, S 6, GC&SF sur, 330 ft to W and 2448 ft to N line. W. W. Donnelly & Gerke, Grant Bldg., Fort Worth, Univ. Blk 4 1, S 21, Univ. Blk 4, 1320 ft to W and S lines. Independent Oil & Gas Co., F&M Bldg., Fort Worth, A. S. Burleson 7, S 100, B 3, T. C. Jones, MK&T sur, 918 ft S of No. 2, Gulf Prod. Co., Fort Worth, J. T. McElroy 4, S 197, B F, CCSD—RGNG sur, 1980 ft to N and 660 ft to W line.

Wichita County—Ryan Cons. Pet. Co., Bartlesville, Okla., G. Nance 29, S. O. Fowler sur, 360 ft W of No. 25; R. M. Waggoner 12, B 84, RRVL sur, 300 ft N of No. 13. Magnolia Pet. Co., Dallas, Section 2 Oil Co. 9, B 2, T&NO sur, 150 ft to S and W lines. B. Ramming 1, HT&P sur, 200 ft to W and 1290 ft to S line. J. F. Weyand, 812½ Scott Ave., Wichita Falls, Harding Farm 2, O. Faprish sur, 150 ft to N and 450 ft to E line. J. L. Swanner, Box 768, Wichita Falls, Williams & Parker 7, B 3, J. McCool sur, 150 ft to N and 560 ft to E line. B. H. Hubbard et al, 106 W. Ida Ave., Electra, T. L. Burnett 2, S 2, B 507, HTB sur, 200 ft to N and W lines. Clark & Campbell, Brown Bldg., Wichita Falls, Sioux V. O. Co. 13C, B 5, GC&SF sur, 406 ft to N and 967 ft to E line. McConnell, Tedford & Chair, Wichita Falls, B. Browning 1, B 6, G. Imig Co. sur, 1050 ft to N and 150 ft to W line. M. L. Davis, Box 785, Wichita Falls, M. J. McDonald 1, B 28, B. Creek sur, 150 ft to S and E lines. P. J. White et al, Harvey Snider Bldg., Wichita Falls, S. Mitchell 6, B 7, P. Castleman sur, 300 ft SE of No. 5. Panhandle Ref. Co., Wichita Falls, Kemp & Kempner 3, B 49, J. A. Kemp sur, WVFL, 150 ft to E and 275 ft to S line. Cannon & Smith, 1410 16th St., Wichita Falls, H. L. Sands 1, B 32, RRVL sur, 300 ft to N and 250 ft to E line. F. C. Baldwin et al, Box 344, Fort Worth, W. G. Kennedy 29, S 6, GC&SF sur, 150 ft E and 450 ft to S line. R. M. Waggoner, Bob Waggoner Bldg., Wichita Falls, Munger Bros. 16, lots 14, 51 and 20, B 25, KW&VFL sur, 500 ft to W and N lines. Red River Oil Co., Box 712, Tulsa, Okla., B. A. Bywater 13, SPRR sur, 875 ft to W and 1200 ft to N line. The Texas Co. Prod., Electra, Ed Foster 1, S 832, B A64, S. Dennison sur, 800 ft to W and 3750 ft to S line. J. Ferguson, Waggoner Bldg., Wichita Falls, A. C. & L. H. Horn 1, M. Gilbert sur,

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150 ft to S and W lines. T. F. Hunter, Wichita Falls, J. & J. Waggoner 21, S 1, GC&SF sur, 300 ft S of No. 20. J. H. S. Bonner et al, Staley Bldg., Wichita Falls, H. Cole 13, J. McCool sur, 300 ft N of No. 12. Paul Green & Paul Lowe, Electra, P. Lauve 1, S 1, B 1, lot 6, M&T sur, center of lot 6. W. J. Grisham, Harvey Snider Bldg., N. H. Martin 1, S 4, H. Hastie sur, 150 ft to S and E lines. P. R. McLean et al, Box 86, Rt 4, Wichita Falls, E. F. Gaston 1, J. Aldridge sur, 473 ft to S and 460 ft to E line.

Webb County—Staggs, Gresham & Johnson, Mirando City, Bruni-Killam 1, S 126, B 3, NW cor. Magnolia Pet. Co., Mirando City, Mag-Garcia 7, sur 11, 150 ft to N and 450 ft to W line. Murchison & Fain Oil Co., Mirando City, E. Garcia 5, J. W. Littig sur, B 58, 1639 ft to W and 1350 ft to N line. Sun Oil Co., Dallas, A. M. Bruni 9, Bruni Sub-Las Albercas sur, 440 ft N of No. 6 Morris Drlg. Co., Mirando City, S. Benavides 1, M. E. Hale sur, B 454, 200 ft to NE and 200 ft to SE line.

Wilbarger County—Phillips Pet. Co., Bartlesville, Okla., W. T. Waggoner D16, S 42, B 4, H&TC sur, 629 ft to N and 230 ft to E line. Empire Gas & Fuel Co., Wichita Falls, W. H. Stephens 52, S 83, B 14, H&TC sur, 340 ft to S of No. 49. Magnolia Pet. Co., Dallas, M. Waggoner 1, S 16, B 5, H&TC sur, 150 ft to NW and 1170 ft to SW line.

Williamson County—Nunan Pheir & Wright, Round Rock, A. J. Nelson 1, Eaves sur, 900 ft to S and E lines.

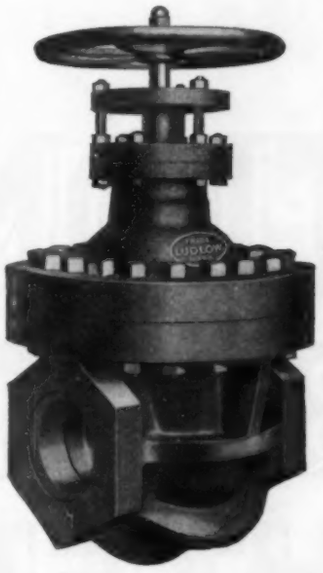
Young County—Roxana Pet. Corp., South Bend, J. W. Burgess 3 H. M. Smith sur, 250 ft to N and 500 ft to W line. H. M. Ford 12, W. T. Canter sur, 1300 ft to E and 2361 ft to N line. M. L. Leterman, Oklahoma City, Okla., G. Garrett 1, B 12, YCSL sur, 150 ft to S and 330 ft to E line; 1, B 12, same sur, 150 ft to S and W lines. Panhandle Ref. Co., Wichita Falls. O. W. Matthews 3, A. Rohus, sur, 150 ft to N and W lines. Roomer Oil Co., et al Wichita Falls, H. E. Neelley 2, S 176, TE&L sur, 150 ft to N and 450 ft to E line. Stafford & Hays, Graham, Mattehws 2, A. Rohus sur, 1057 ft to W and 1875 ft to N line. Burt Lambert, Wichita Falls, G. B. Hamilton 1, S 1393, TE&L sur, 150 ft to S and E. lines. Morrisey, Riggs & Leahy, Wichita Falls, G. Stewart 1, S. Tynes sur, 780 ft to W and 1366 ft to N line. Westenult & Noble, South Bend, M. Graham 2, Bolton sur, 300 ft to N and W lines. Golding & Cochran, Wichita Falls, J. T. Hunt 1, B 175, TE&L sur, 150 ft to N and E lines. A. Munich, Archer City, J. J. Williams 2, B 257, TE&L sur, 150 ft to W and 1050 ft to N line.

Russian Exports Reach Record Volume

Washington, D. C. — Oil exports from the Soviet Union for the Soviet fiscal year ending September 30 broke all Russian records, according to statistics received by the Russian Information Bureau. The total exports were 1,450,000 metric tons as compared with 1,316,000 tons in 1924-25 and 914,000 tons in 1913. Exports of gasoline were 400,000 metric tons, an increase of 47 per cent over the previous year and triple the pre-war figure. The exports of lubricating oil increased 31 per cent over the previous year, while exports of fuel oil fell off eight per cent and kerosene 22 per cent.

Oil production for the year was 8,348,000 metric tons, compared with 6,960,600 in 1924-25 and 9,216,000 in 1913. Producing figures showed a monthly steady increase of three to four per cent during the last six months of the fiscal year, and during August and September were above the pre-war average. For the full year production reached 91 per cent of that of 1913.

Tests and Experience



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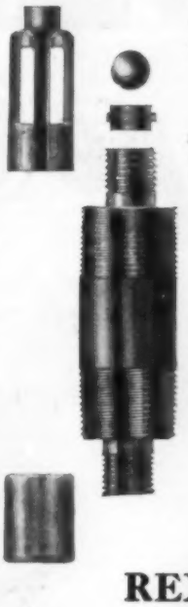

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REX STANDING VALVE

ITS REVERSIBLE, TWO IN ONE VALVE SCREWS IN BOTTOM OF WORKING BARREL COLLAR — REDUCES YOUR TUBING JOBS.

Manufactured in Brass or Steel

Sold by Supply Houses

REX SUPPLY COMPANY

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Tret-O-lite

(Reg. U. S. Pat. Office)

PROCESS PATENTED. The Barnickel processes for treatment of cut oil and other petroleum emulsions by the use of chemical agents are protected by valid process patents issued by the United States and foreign countries.

The purchaser of TRET-O-LITE is licensed to practice the Barnickel processes to the extent permitted by the quantity of TRET-O-LITE purchased. He is not licensed to use any other chemical covered by the Barnickel patents, either alone or with TRET-O-LITE.

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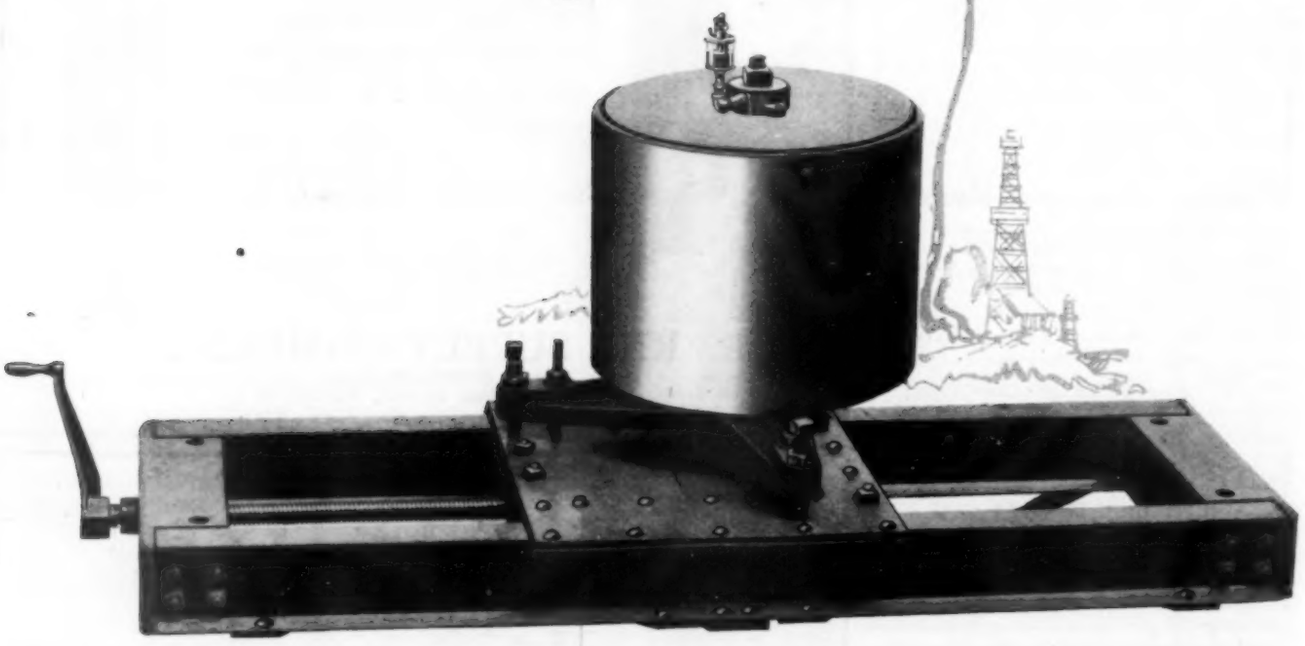

THE NATIONAL SUPPLY COMPANIES

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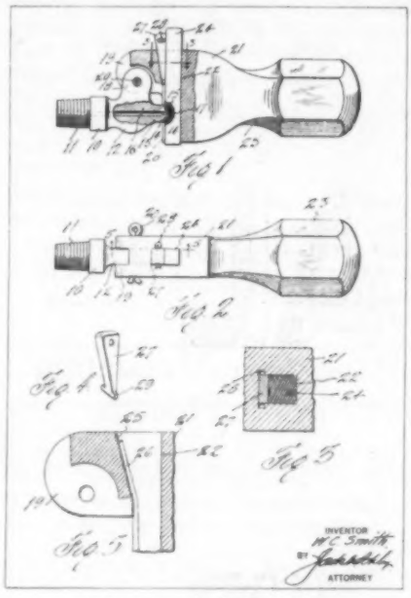


Smith Gauge Cock for Boilers

Smith Gauge Cock for Field Boilers

W. C. Smith, Corsicana, Texas, has introduced a gauge cock for use on field boilers that is giving success wherever used. According to the owner of the patent, the device has several advantageous features.

The plug of the cock is provided with a flat face or seat having a short projecting nipple. The seating member seats flat against the face and the nipple does not embed deep enough in the packing to cut it. Thus the life of the packing is increased. Also the flow is effectually cut off when the cock closes.

This cock makes possible the use of a longitudinally adjustable multiple-sided packing, thus making adaptable piston packing, lead bars of other material and enables the use of each side of the material.

More information will be supplied by W. C. Smith, Corsicana, Texas.

Butler Manufacturing Company Moves Offices

Kansas City, Mo.—Growth of the Butler Manufacturing Company within the last year is forcing it to move its general offices from 1326 Grand Avenue, to its plant at 13th and Eastern, in the Blue Valley Industrial district. An addition to the plant offices is now being made; this includes the preparation of new quarters for the executive and general offices and the enlarging of the cafeteria, locker rooms and factory offices. The new quarters will have an area of about 15,000 square feet.

The work will be completed about December 1. At that time 135 employees will move from down town to the factory offices.

Only a few months ago the company found it necessary to secure added warehouse space, and constructed a ready-made steel warehouse building of its own manufacture and of the same type it produces for the general public. This addition is 76 feet wide and 128 feet long, adding 9728 square feet of space to the Butler plant.

Recently, it purchased a tract of ground adjoining the factory plant, enlarging the present plant site to two full city blocks.

The Butler Manufacturing Company is a Missouri corporation and one of the pioneer manufacturers for the oil industry. It was incorporated in 1901, having been started by Charles R. Butler, its present president, E. E. Norquist, its present first vice-president, and N. W. Butler.

They began with the manufacture of stock tanks. Today their regular lines of manufactured products cover a range of articles from hog troughs and feed pans to tanks as large as 55 feet in diameter and having a liquid capacity of 10,000 barrels and ready-made steel buildings, with a clear span up to 100 feet in width and any length desired.

Kuehne Foot Valve Has Superior Features

The Kuehne hinge-type, full-opening foot valve, manufactured by the Alamo Iron Works, San Antonio, Texas, is recommended as having a number of superior features.

It is said to be a full-opening foot-valve with very little friction, as it has a straight waterway with an area larger than the pipe. The valve body and valve seat are all cast in one piece, making it possible to use the Kuehne Valve without a strainer when necessary.

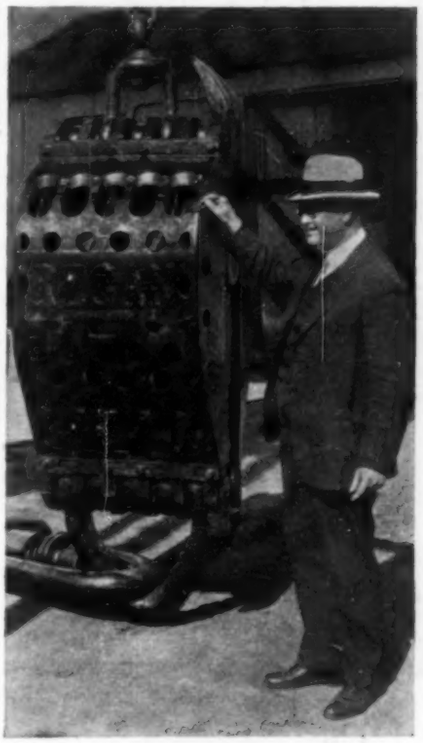
No gaskets are used in this valve and there are no joints.

The valve raises completely off the seat and has a backward movement, giving greater water way area and a straighter course. The valve does not have to raise to a great height from the seat to give it a full opening movement which is said to greatly reduce the water hammer.

The valve body and valve seat are cast in one piece.

Additional information can be secured from the manufacturer.

Kuehne Foot Valve



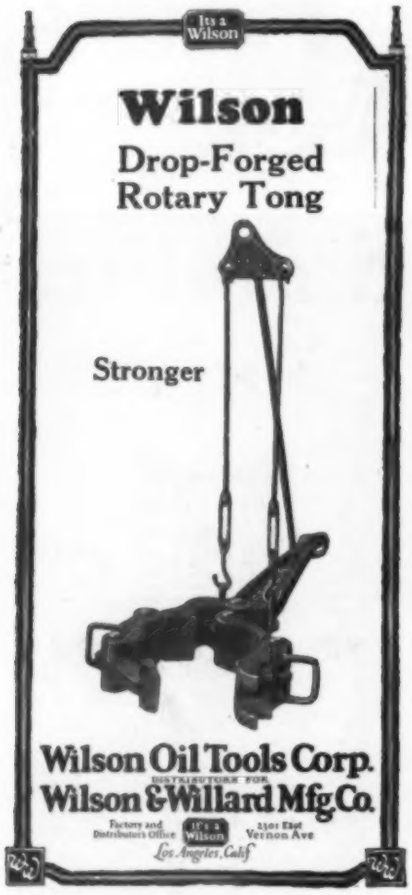
Joseph Regan demonstrating the 5-sheave Regan Block.

Mammoth Traveling Block Being Made

What is declared to be the largest traveling block ever constructed is now being manufactured by the Regan Forge and Engineering Company of San Pedro, California.

The traveling block has five sheaves and thus will handle ten lines and an eleventh line to the swivel on the top of the block. The sheaves in the block are set staggered fashion, that is, the bearings are staggered permitting compactness. Instead of using one bearing within the sheave which would rotate with the sheave, the Regan sheaves have two bearings to each, placed on opposite sides of the sheaves giving a two-point bearing contact and thus preventing destruction of the bear-

ings from side thrusts. The pin of each sheave is integral with the sheave and rotates, permitting of wide distribution of wear, according to officials of the Regan Forge and Engineering Company. The five-sheave block is now being used in many wells in California and has excited much interest. In the drilling of the new Ventura field many of the blocks are in operation and are found eminently satisfactory for extra deep drilling where tremendous loads are imposed upon the block. The manufacturers state that it is impossible to overload the five-sheave block regardless of how many tons of pipe or casing are being carried.



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Dinner . . . . . 85c & $1.25
also A la Carte Service

Baird Tool Works Moves Into New Plant

Tulsa.—The Baird Tool Works, manufacturers of oil field equipment, are now in their new plant which is in full operation. The new plant was necessitated by the rapid growth of the company's business which demanded increased facilities.

Well known products of The Baird Tool Works include the Baird Traveling Valve, an improved reciprocating piston type upper valve which has ports that are opened and closed by the sucker rod motion. The valve is adaptable for use in standard working barrels or it can be equipped with a special lower cage connection for use with any type pumping unit.

Compo Valves made in the plunger and ball and seat types eliminate the use of valve cups by a special resilient packer assembly which functions by fluid weight.

The Leonard combination sucker rod sockets in both the bull dog and trip and bull dog types are familiar Baird products. For taking care of floating sand the company recommends the Spivey Sand Trap.

Steel Castings Company Enlarges Plant

Tulsa. — Oklahoma Steel Castings Company has let the contract for an added unit to its main plant, 60x66 feet.

The new unit will be used to house the core department. Additional equipment is also being purchased, including core ovens from the Swartout Company of Cleveland, Ohio, and a complete sand mill installation from National Engineering Company of Chicago.

This will be the second new unit built within the last six months, to take care of the company's expanding business in refined electric steel castings in the Southwest.

Standard Gasoline Company Moves to New Quarters

Los Angeles. — Standard Gasoline Company, of Los Angeles, completed moving of its general offices recently to the sixth floor of the Standard Oil Building, Tenth and Hope Streets.

Standard Oil Building is one of the finest and most modern buildings in Los Angeles and a very high standard of service is maintained by E. W. Morgan, superintendent of the building.

With the removal of its offices to the Standard Oil Building, Standard Gasoline Company has effected several changes in its personnel. J. J. Keely, chief clerk, P. S. Ginter and J. A. McGillivray have moved to the new building. Miss E. Kling, formerly stenographer in the casinghead gasoline department, is now with the research and development department and Wm. H. Wachtel, formerly of the Pacific Gasoline Company, is with the producing department of the Standard Oil Company, parent concern of Standard Gasoline Company.

Pittsburgh Accounting Firm in Houston

Houston, Texas. — Main and Company, certified Public Accountants with headquarters at Pittsburgh, announce the opening of a branch office here, in the Union National Bank building.

This company specializes in tax services.

George I. Hall, C. P. A., is manager of the Houston office.

Vacuum Abandons Deepest Gulf Coast Hole

Houston, Texas.—Vacuum Oil Company has abandoned its Lock-Moore No. 4 well at Lockport field, Louisiana, at a total depth of 6420 feet, marking the failure of the deepest well drilled in the Gulf Coast territory. The hole was drilled to a point 393 feet lower than that of the Vacuum's Phoenix B-1, which was abandoned last spring at Lockport at 6027 feet, then the record for deep drilling in the coastal country.

Some of the best performance seen in deep drilling in this section of the country was displayed on the Lock-Moore No. 4, an example being the completion of a successful fishing job at the depth of 6304 feet, when 6⅝-inch casing parted 1800 feet below the surface. The string was recovered and the hole deepened to 6420 feet, where black shale caused the giving up of the hole.

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GALLUP MAP & SUPPLY COMPANY
1320 Walnut St., Kansas City, Mo.

Roto Company Now In New Jersey

Newark, New Jersey. — The Roto Company formerly of Hartford, Connecticut, has recently moved to this city and is established at Sussex Avenue and Newark Streets.

The move was made in order to secure larger quarters and better shipping facilities.

LOUISIANA WILDCATS

(Continued from page 78)

Co.'s Senseman 1, 18-14-7e, set 10-inch 100 ft. R. W. Williams' Elkhart-Lemon 1, 17-14-8, sd 2020 ft.

GRANT PARISH—Ayers et al's Blackshear 1, 6-9-1e, rig. Billeaud et al's Ball 1, 19-7-1e, sd 1720 ft. Holmes et al's Holmes 1, 17-9n-1e, dk; Holmes A-1, 17-9n-1e, dk pat. J. L. Holmes' Fee 2, 17-9n-1e, dk. Humble O. & R. Co.' L. & A. Oil Co. 11, 29-2n-2w, lcn. W. R. Keever's Barrett 1, 19-9n-1e, dry 1667 ft. J. J. Long's Calhoun 1, 4-7-4w, dr 1720 ft. Tunica Pet. Co.'s L. & A. Oil Co. 8, 11-8n-2w, coring 1705 ft; L. & A. Oil Co. 10, 8-8-1w, dr 1400 ft.

JACKSON PARISH—El Dorado Chief Oil Co.'s Jones 1, 3-14-4w, dr 2700 ft. Ferguson Trust's Martin 1, 3-15-1e, sd 2943 ft. Grigsby & Co.'s Adams 1, 22-17-4w, dr 2435 ft. Houseman et al's Norton 1, 34-15-3w, sd 400 ft. Louisiana Pet. Co.'s Theus 2, 12-16-3w, sd 1500 ft. Raymond et al's Davis 1, 13-16-2e,

NATCHITOCHES PARISH—Lawson et al's Clark-Morse 1, 23-5-6w, rig. McCormick et al's Russell 1, 41-10-7, coring 1950 ft. Ohio Oil Co.'s L. & A. 1, 23-13-6w, dr 1200 ft. Three League Oil Co.'s Long 1, 34-10-7w, dk.

OUACHITA PARISH—Gulf Ref. Co.'s West Virginia O. & G. Co. 1, 17-17-5e, dr 2420 ft. Ouachita N. G. & O. Co.'s D'Arbonne 2, 25-19-2e, coring 2490 ft.

RAPIDES PARISH—Hincy & Mack's Barrow 1, 29-5-2e, sd 2800 ft. Minnesota Oil Co.'s Wattermark 1, 7-5-3w, sd 600 ft. Libuse O. & G. Co.'s Voda 1, 12-4-1e, dr 2355 ft.

RED RIVER PARISH—S. M. Cagle's Ball 1, 5-13-9, dr 300 ft. The Texas Co.'s Marsten 1, 16-14-11, dr 900 ft.

RICHLAND PARISH—Aarnes et al's Hawley 1, 3-18-9e, sd 50 ft. Gulf Ref. Co.'s England 1, 32-17-6e, 5 million ft gas, lubricating, 2340 ft. Oliver et al's Hatch 1, 2-15-5e, dr 100 ft.

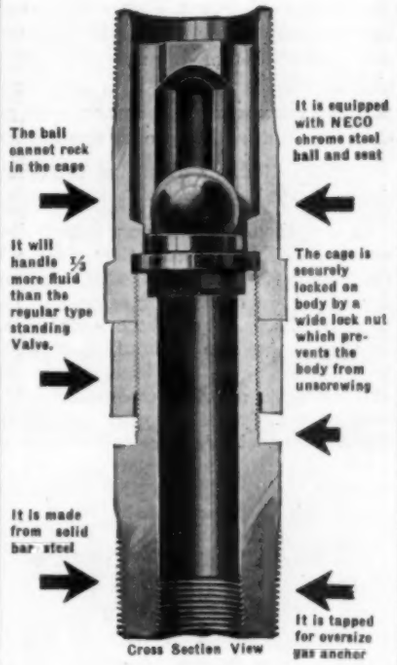
SABINE PARISH—Emlet et al's Bowman-Hicks 5, 8-7-12, sd 4070 ft; Bowman-Hicks 7, 11-7-14, sd 2121 ft; Sabine Lumber Co. 1, 8-7-1e, dk. Godchaux et al's Mills 1, 12-4-1e, dr 2150 tf. Magnolia Pet. Co.'s Louisiana Long Leaf 1, 16-6-11, dr 2080 ft. Lewis Pet. Co.'s (Reliance) Wyatt 1, 23-5-12, dr 1150 ft.

UNION PARISH—Camette et al's Tugwell 1, 21-22-1e, dk. Ohio Oil Co.'s Hendricks 1, 30-19-1e, dk. Rhodes et al's Futch 1, 28-23-2w, rig.

WEBSTER PARISH—J. R. Garrison's Hudson 1, 17-19-10, dr 345 ft. Labore et al's Bruner 1, 30-19-10, set 6-inch 509 ft. Ohio Oil Co.'s Bank of Cotton Valley 4, 22-21-10, dr 3790 ft. Smitherman & McDonald's Oakley 1, 29-23-11, dr 5075 ft. Southern Crude Oil Purch. Co.'s Munn-Wadley 1, 1-22-10, sdtr 4400 ft.

WINN PARISH— Dodge et al's Tremont 1, 35-13-3w, dr 350 ft. Greer et al's Bodcau 1, 9-11-4w, set 10-inch 80 ft. Humble O. & R. Co.'s L. & A. Oil Co. 16, 29-10-1w, dr 1300 ft. Hyde & Nelson's Louisiana Central 1, 16-13-1w, dr 1560 ft. J. C. Long's Milam 1, 26-13-3w, fresh water 704 ft. Ohio Oil Co.'s Edenborne 1, 4-12-1w, dr 3075 ft.

6
Points of Value
in the
NECO
Standing Valve


The ball cannot rock in the cage
It will handle ⅓ more fluid than the regular type standing Valve.
It is made from solid bar steel
It is equipped with NECO chrome steel ball and seat
The cage is securely locked on body by a wide lock nut which prevents the body from unscrewing
It is tapped for oversize gas anchor
Cross Section View

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LETTERS OF Paul Peebles P.S.G.

My Dear Cleopatra:

Cleo, honey, the girl which has got to transcribe what I write to you on this here coupling which I am talking to tonight is going to have a job with it on account of I am going to tell you about something which neither you or her know anything about on account of both of you is women, but she will probably have the hardest time on account of some of the words which she will have to spell, only maybe she will take a chance on you not knowing any better and spell them anyway she wants to. I guess that will be alright with you, so if it is any words you don't know what they are, well you can just grunt and skip over them.

I want to tell you about the continental drift.

It is a theory which was talked about up to New York where they went with the geologists meeting so that the small fry would not be hanging around so they could spill as many eight cylinder words as they wanted to without some school boy raising up in the back of the hall and embarassing the speaker by asking him what the word he just said means. These super-scientific geologists have got a mutual understanding that they will not question each other on the words they use, which is a good scheme for keeping down a row. If a fellow says a few words they don't all know, well they say he is a doctor and let it go at that.

But this here continental drift business is pretty new in the oil geology business and they are choosing up sides for and against it. Some peaceably inclined members are on the fence and still others which has good steady jobs at good wages is not giving a continental dam about it one way or another. I used that mild cuss word, honey, not to offend your finer sensibilities but because you are probably more familiar with continental dams than anything else I will say to you about continentals. Aint I right?

Well to make it easy for you to understand, the theory of the continental drift is that the earth is made up of two kinds of rocks which a fellow named Suess says is "sial" on top and "sima" on the bottom. The sial rocks are made out of silicates, with aluminum, sodium and potassium in the majority. Granite and orthogneiss are the kind of rocks that makes. I know what granite is and you can guess about the other. Then under that crust is some more silicates which consist of more magnesium and calcium and less of the other stuff, so that it is what us geologists calls igneous rocks, which fits right in with the Sunday school teachings that hell is in the middle of the ground and is hot.

Well you would not never guess that a rock would float on rocks, but that is the theory. The under rocks is more less stable than the granite rocks which stay where they are put unless they would be floating around, which is the theory of the drift.

Well since they are choosing up sides whether they will be in favor of this theory or against it, well I will say right emphatic that I am against it. It was hard enough for them to convince me that the earth is round, must less that it is floating. So I say we ought to stay by the theory we have until the people in Tennessee are sold on the idea that the sun does not move, and then we can bring on this theory of the continental drift.

Of course, honey, I would not be against anything unless I had a good reason for it. So I will give you some reasons for being against the continental drift, which means in simple language that the continents are floating on rocks under them and drifting around because the top of the earth is not tied down to the middle.

Well that would be disasterous to the oil business. Take down at Goose Creek, forinstance. Suppose the top of the ground at Goose Creek was to decide that it would move up toward Houston a few miles. Well first off it would make another crook in the Houston Ship Channel and the people of Galveston would be the only ones that would like that. But that would not bother the oil business so much as having all their casings which they have got set down there broke off and the well ruined. Then it would move the gulf up over the producing leases and put all the derricks over dry holes. Another thing if the earth gets to drifting around us geologists will be locating oil fields and then the ground will move off from over them and it will ruin our reputations when they drill. It would just not be right.

Another thing, if they was to have a hard winter up in Alaska and Canada and a whole pile of snow was to pile up there and freeze into ice, it would make the old boat of North America list to the upper end and pull all the pipe in the sands at Goose Creek up out of the producing sands, and the Panhandle and Oklahoma would be sitting pretty because they are about the middle of the seesaw. Of course it would be alright if all the snow was to get into a big snowball and roll back and forth so as to rock the boat kinder, and that would jog the pipe up and down in the oil sand and maybe make it flow better.

But putting my selfish interest in the oil business to one side, it would be dangerous to have the continental drift, because if the continent is floating it is because it is lighter than the stuff under it, just like a boat floats in water. Well if we keep on taking out gas and taking on water ballast in the place of it, well pretty soon our old boat will be sinking and there would not be nothing left sticking up but the rocky mountains and they would not be big enough for all us to hang onto, and maybe it would not be enough water to cover up the ground and leave any ocean, which would kinder change things all around.

But if they win out on that theory, honey, you must be thankful for isostasy, which is a fine word I have been saving up to say to you. It is a phenomenon which has a large part in keeping the right side of the earth on top, which is important more or less in the present scheme of things. If it was not for that the world would sink in itself. That would be kinder like two snakes swallowing each other, which is an experiment I have always wanted to see tried out.

Just think, honey, what it would mean if it is proved that the ground is just floating around and we would not know one day where we would be the next. With the Panama Canal cut through so as to cut the two continents on this side loose from eacth other, well the north one might decide to drift around and knock Mexico off against Asia and ruin all of them islands in the Pacific ocean and just when the farmers in the Rio Grande valley was getting ready to pick their grape-fruits they would be pushed up against the North Pole, and at the same time the polar bears would be down south here with too much overcoats on. I just believe, honey, that nature is too smart to have anything like that possible. But maybe we have set enough casing to hold the old top of the earth where she belongs.

Well honey I will close as the bell on the doogigger has rung and will maybe come down to see you next Thursday if you are going to have turkey and your maw will ask me to dinner,

Your loving Paul

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USE Baroid to prevent the escape of dangerous subterranean gases. When properly employed, it seals off the gas-bearing strata — keeps your well from suddenly "blowing wild."

Baroid is a form of barytes that stays in suspension. It builds a strong, durable arch—one that will stand firm against erosion. When Baroid is used, drilling becomes both safe and economical.

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Send for a sample of Baroid. Mix it with water. Do the same with some "mud from your slush pit." Let both mixtures stand. You will see that Baroid stays in suspension while the other material settles out.

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SQUEAKS FROM THE BULL WHEEL

In 1950

Advance clipping from Liquid Fuel News, year 1950—Users of liquid fuel from petroleum, coal, lignite, shale, saw dust, corn stalks, and molasses, held an indignation meeting yesterday, because of an advance of a quarter of a cent in the price of liquid fuel last week. Representatives of the liquid fuel interests laid responsibility for the advance on one another. Consumers stated that now that house heating, lighting, refrigeration, electric fans, cooking and transportation all depended on liquid fuel. Congressional investigation is necessary. Senator Gass stated that the advance was due to the Standard Oil Company; delegates had great difficulty in parking their airplanes. Several hundred of them circled around in the air for four hours trying to find a place to alight. It is rumored in the lobbies that the liquid fuel people are forming an organization to prevent overproduction. A charge was made on the floor that the Report of the Committee of Eleven (1925) purposely minimized the extent of resources to influence prices. Prohibition authorities reported that the only thing left from which potable alcohol could not be made seemed to be dogs and cats. Patent litigation involved started in 1918, reached preliminary hearing on oral argument of defendants to strike out every other line on first 6384 pages of complaint. Plaintiff's attorneys stated that if the motion was successful, complaint would read just as well—but are moving to place semi-colon on 3rd line, page 711, instead of hyphen.—A. P. I. Daily Digest.

The Whole Business

The Frenchman loves his native wine,
  The German loves his beer,
The Englishman loves his 'alf and 'alf,
  Because it brings good cheer;
The Irishman loves his "whiskey straight,"
  Because it gives him dizziness,
The American has no choice at all,
  So he drinks the whole darned business.
—Acton (London) Hospital Gazette.

Obviously

An Englishman and Scotchman were arguing about the army.

"In order for a man to be buried with full military honors he must be a Captain," said the Englishman—

"Or a General," said the Scotchman.

However, they called their friend, an Irishman, to solve it.

"Well," said Pat, "you both are wrong. In order for a man in the army to be buried with full military honors he must be dead."—Cork Examiner.

How the Banker Won

A prominent California banker while talking to a friend the other day about one of his many angling expeditions told the following story:

"It is remarkable," he said, "how mean some people are. On my last fishing trip I had with me two chaps from Los Angeles who evidently were familiar with my reputation for landing fish. Before starting one of them made the suggestion that the first one who caught a fish must treat the crowd.

"I agreed to this, and we started. Now, don't you know, both those fellows had a bite right off the reel, but they were too mean to pull up."

"I suppose you lost then, remarked the friend.

"Oh, no," replied the banker. "I didn't have any bait on my hook."—Everybody's.

Restoration

Traffic Cop halting a speeding motorist:

Say, what's the idea of paying no attention when I whistle for you to stop?

I'm sorry sir, but I am deaf.

Well, we'll see that you get your hearing in the morning.

Perhaps They Have

Mrs. Knowall took a great interest in the doing of all the neighbors.

"Well," said her husband, when he returned from business in the evening, "have you found out anything about the social standing of the new folks across the street?"

"Not yet," was the reply. "They have no car."

"No?"

"Yes, and they have no pom, no phonograph, no radio, and not even a grand piano. I can't imagine what they have got."

"Humph," remarked the husband, "perhaps they have a bank account."

Not Needed

"Have you a lawyer?" asked the judge of the two men brought before him for speeding.

"No, your honor," answered one of the accused. "We have decided to tell the truth."

More Important

"Isn't what they call 'the approach' an important thing in golf?"

"Oh, very. You have got to have the kind of a job that will permit you to approach the golf links early in the afternoon."

What Every Husband Knows

A woman will wear a golf outfit when she can't play and a bathing suit when she can't swim, but when she puts on a wedding dress she means business.—Vermillion Times.

Cure for 'em

Heard one of the bright young men say "Poor man, is there no way to get rid of the cooties?"

Hard Boiled Guy—Yes, take a bath in the sand, and then rub down with alcohol. The cooties then get drunk and kill each other throwing rocks.—Humble Bee.

Tillie—Gee, what a bad cold you have. How did you catch it?

Kellogg—Someone played the Star Spangled Banner while I was taking a bath.

No Bollweevil Ever Got This Busy

A northern guest at Pinehurst happened upon an old negro, who was beating down dried cotton stalks. "Uncle, what did the boll weevil do to you this past year?" he inquired.

The old darkey looked up, saw "one o' dem nawtherner folks," and answered him in this manner:

"Lawd, boss, dey was de wust here dat dey has ever been. Why, one night I was awoke from my res' by such a noise dat I ain't never heard de lak befo'. I takes my lantern and goes out in dat patch over dere, and what do you 'spose I foun'?"

"I have no idea, Uncle. What was it?" the northerner replied.

"Lawd, Cap, the old pappy boll weevil had a big stick beating all de little boll weevils 'cause dey wouldn't take two rows at a time."

Too Much

Foreman—Wot's up, Bill, 'urt yourself?
No; gotta a nail in me boot.
Why don't you take it out, then?
Wot! In me dinner hour?

And So Near Christmas

Duncan got stung on a lot of watered stock.
Why, I never knew he played the market!
He doesn't. His bootlegger double-crossed him.

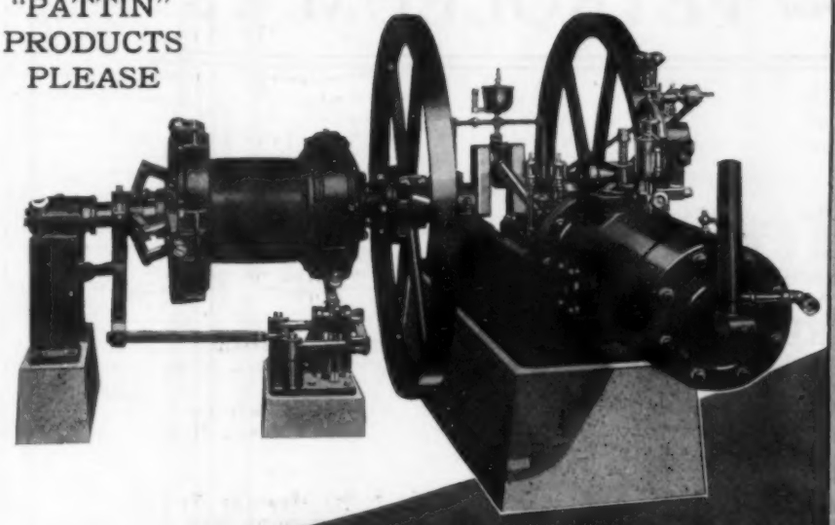
Not Interested

A gift for your daughter? How about this dainty garter purse?

No, I don't think it would be wise for her to carry her money in plain sight.

"PATTIN" REVERSE GEAR ENGINES

"PATTIN" PRODUCTS PLEASE



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Fitted with the latest fly ball governors and our built in By-Pass Valve that eliminates all extra by-pass valves and piping;—all shaft bearings have chain and ring oilers; reverse gears are made of steel, helical gears are bronze bushed—and run in oil.

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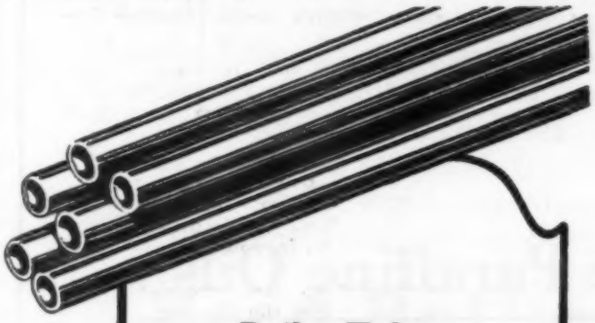

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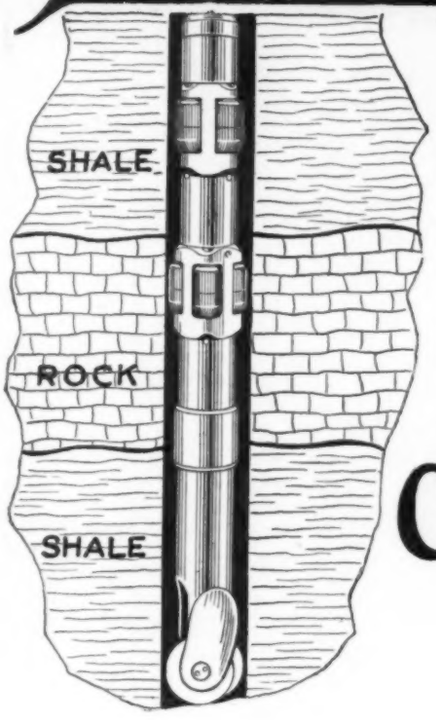
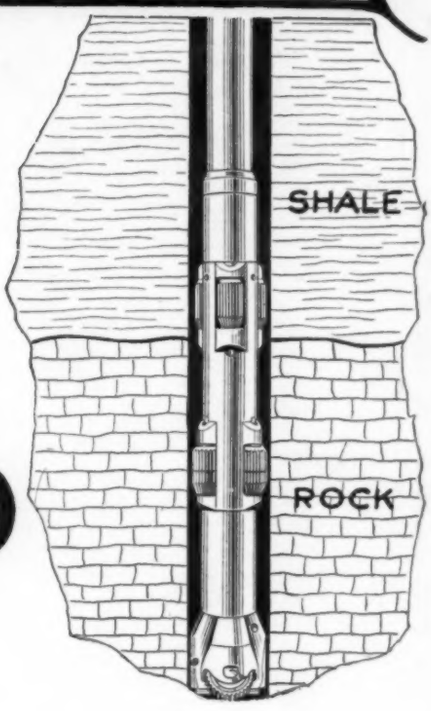


Prevent CROOKED Hole



Every operator knows that a crooked hole usually results in much grief.

Those who have used a Reed Double Three-Point Reamer or a Double Four-Point Reamer on the drill stem, right behind a fishtail or a disc bit, have found that this stiff, rigid member, with its many points of contact, tends to keep the bit in its straight, downward course—even though boulders and slanting formations are encountered. A straight, full-gauge hole is assured in one operation, and all of the time usually consumed in after-reaming is saved. Casing slips in as though it were greased.

Reed Roller Bit Company

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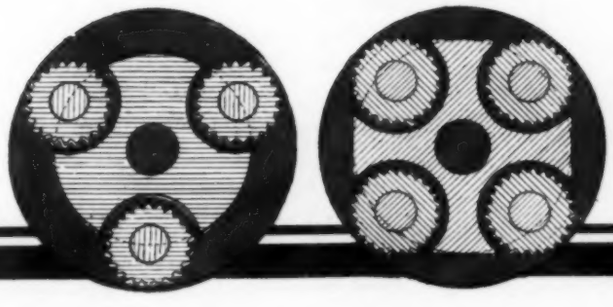
Reed Reamers

The Reed Double Three Point Reamer leaves 35% of the hole clear.



The Reed Double Four-Point Reamer leaves 28% of the hole clear.

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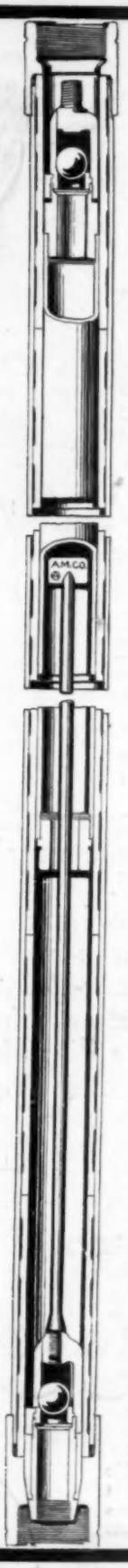

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You should see the new Axelson Super-Size Standing Valve. It's a great improvement. Gives as high as 89% more area to let the fluid thru. Less friction and a stronger seat. Ask about it.

The Axelson Vanishing Thread — embodied in our Sucker rods—has been the outstanding type for years. It is based on scientific design. The width of the threaded pin graduates to a larger size as it approaches the shoulder. Gives extra strength right where needed.

A pump is economical in proportion to the service it gives. Axelson Pumps cost slightly more than several other types but they are cheapest in the long run.

Maintenance of adequate stocks at the factory allows of prompt shipment, often the same day order is received.

More Axelson Sucker Rods are in use than any other type. Such a record speaks for itself.

In most fields the Boys call 'em Working Barrels. In other Fields they are called Pumps.

We have never received a complaint about the way we packed pumps for export shipment. But we've heard a lot of good comments about the staunchness of our shipping cases.

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